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MAX R. BRUNSTETTER, *Editor*

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TEACHERS COLLEGE RECORD

Counseling Youth for Wartime Jobs

ROY N. ANDERSON

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THE day of waiting for some purposeful activity, such as employment, as revealed by the youth surveys of yesteryear, is past, and decisions by young people about work and their contribution to the war effort are now being made while they are in school.

In an "Outline of War Problems of High School Seniors," Mooney lists the following problems with which young people today are wrestling at age seventeen:

"What should I do between now and the time I am called into military service? Should I continue in school even when I don't know whether or not I'll be able to finish the course in which I am enrolled? Should I loaf and have a good time, maybe the last chance I'll have? Should I get a job, make some money, and help in the war effort that way?"

"Is it unpatriotic of me to enter college now? What will people think of me if they see me going off to college when the other boys are going into military service?"

"Does a girl have a right to go to college when all the boys have to go into military service? Should I sacrifice, too, and take a job in a war plant to do my part until the war is over?"

"Should I give up college and go to a commercial school to take training for clerical work? They need clerical workers now. If I go to college, conditions are changing so fast and are so uncertain in the next few years, I don't know what kind of training to get. They want nurses now, but after the war, won't there be a flood of nurses? They need teachers now, but after the war, won't there be a flood of teachers?"

"If I continue in school until I am called into military service, should I go ahead with the training I had planned and go as far as I can before I am called, even though I can't see how this will be of any help to me in the military service? Should I take training which has a definite military value? Should I

take general courses, since I can't tell now what specific courses may be of use in a specific skill or trade, even though I had wanted to take longer courses in preparation for a profession or some more advanced skill?"[1]

PRINCIPLES OF VOCATIONAL GUIDANCE

The answers to these important questions cannot be given categorically and they will not be the same for each youth. They must be founded upon certain principles of vocational guidance. One of these is that no two individuals are identical in natural endowment or in environmental conditions. It will be admitted that war demands must sometimes disregard individual differences, and it is now a question how the individual may best serve the armed forces and not how the armed forces can serve the individual, although effort is being made to place each individual according to his abilities, aptitudes, and interests. War service performed on this basis will facilitate postwar adjustment.

A second principle of vocational guidance is the inherent right of the individual to make his own decisions. It is the counselor's function to present the facts and point out the various alternatives, but not to make the choice for the individual. The client should be given the maximum amount of information but the minimum amount of advice. In a democracy, the individual should be helped to choose the field where he will be most useful, though, "until victory," this freedom of choice will be somewhat curtailed. For example, a recent executive order removed the choice of enlistment in the Army, Navy, Marines, or Air Corps. As we move closer and closer to victory and peace, we shall find that we shall have to pay with a limitation of our own choices. As we have had conscription for military service, we may soon expect conscription for production purposes and the movement of labor from non-defense-producing areas to areas which have been completely geared to war production. There must also be a considerable amount of fluidity and flexibility, to conform with ever-shifting military demands. We are faced with the paradox of long-term planning and the necessity of changing our pace or plans on short notice. Should the counselor declare a moratorium on this principle of freedom of choice and take a more positive stand? Many would welcome strong positive advice on the part of the counselor. Yet, on the other hand, we expect the pupil and his parents to make these decisions where we as counselors cannot because of lack of information. If the counselor is to take on this new role, certainly he must be provided with more concrete facts than he now has.

ADDED WARTIME DUTIES OF A COUNSELOR

What increased duties does the war place on the vocational counselor? First of all, he must help the student to envisage his part in the war effort

[1] Mooney, Ross L. "Outline of War Problems of High School Seniors." Bureau of Educational Research, Ohio State University, Columbus, Ohio, 1942.

and at the same time encourage him to give some thought and planning to lifetime objectives. There is always a tendency on the part of youth to overlook the long-term plan and to fail to see how today's activities are tryout experiences along life's vocational highway. It is imperative, therefore, that the counselor assist in developing an adequate program of occupational and military information to enable the students to make wise choices. Regulations and conditions are changing at such a fast rate that it is essential that someone be responsible for collating the various reports, nationally and locally, which will affect the high school youth. In order that this responsibility might be centralized, some schools have designated one of their vocational counselors as "War Service Counselor." Another school calls this counselor "Military Adviser," while in still another, he is called "Military Liaison Agent." The surest way of seeing that high school students get the latest information is to incorporate it in the regular classes. For instance, the Vocational Counselor of the Bureau of Child Guidance in San Diego, California, developed material for a two-week unit on "Military and Essential Service Information" in the social studies which would reach all eleventh- and twelfth-grade students. Materials were secured from federal and local sources and a mimeographed pamphlet, "A Guide for Studying Military and Essential Services," directs the students in considering the following questions: (1) What are the nation's military and civilian needs? (2) What are my qualifications for service? (3) What need can I best meet? (4) What further specific training do I need? (5) Where and how can I get this training?[1]

The next step after acquainting the students with the military and civilian needs is to make provisions for each student to discuss his particular problems with a counselor. Thus some schools have appointed one member of the faculty to serve as consultant on opportunities in the Air Corps, another the Navy, another the Signal Corps, another about opportunities for women in the armed services. Many students do not realize that a special hobby or interest may be the best foundation for further preparation in a particular branch of the service, and counselors should be alert to these special abilities and interests. The student need not have a high degree of skill because that can be acquired better in the specialized training courses offered by the armed services themselves, but certain foundation courses in mathematics, physics, and the like, can be taken in school. An illustration of one type of material which the counselor should have at his disposal is a chart published by the U. S. Office of Education entitled, "Twenty-Six Job Opportunities in the United States Army Air Forces."[2] This chart lists the vari-

[1] The San Diego program is described in "Guiding Youth to Service Today" by H. B. McDaniel. *Occupations, The Vocational Guidance Magazine*, Vol. 21, pp. 363-368, January, 1943.

[2] "Twenty-Six Job Opportunities in the United States Army Air Forces." Issued by the Federal Security Agency, U. S. Office of Education, and U. S. Army Air Force, 1942.

ous types of jobs and specifies the following: nature of duties, location of training centers, length of training period and what the training course includes, the eligibility requirements, such as age, marital status, educational background, the high school and college subjects which would be helpful, the physical requirements, the Army grade and rate of pay and benefits, future promotion, and methods of application.

COUNSELING ON SPECIAL SERVICES

Another obligation of the vocational counselor is counseling youth with respect to the special services for training in war industries and agriculture. At the present time, there are seven such services which are generally referred to by their alphabetical titles: TWI (Training Within Industry) is the national overall agency interested in training on the job, especially foreman-training programs; ATS (Apprentice and Training Service) tries to coordinate the job-training programs of various agencies interested in apprenticeship training, especially school, union, and employer programs; VTWW (Vocational Training for War Workers—formerly, VE-ND, Vocational Education and National Defense) is concerned with vocational training of less than college grade, sponsored by the U. S. Office of Education in cooperation with public schools; OSYA (Vocational Training for Rural War Production Workers) is charged with the responsibility for vocational training of less than college grade in the production of farm commodities and in repair, operation, and construction of farm machinery and equipment; ESMWT (Engineering, Science, and Management War Training) is assigned the training of college grade to prepare technical workers for war industries; NYA (National Youth Administration) trains out-of-school youth sixteen to twenty-five years of age in skills for war plants; USES (United States Employment Service), while it does not give training, has been assigned the task of referring individuals for training, and some of the training agencies accept only trainees who have been referred by the USES. They also direct employment managers to these training centers when they are in need of workers.

Some of these agencies give pre-employment training for production operators and for engineers, chemists, physicists, and sub-professional jobs. Then there are the training courses for those already employed war workers, such as production operators, skilled production specialists (upgrading programs), trade and craft apprenticeship, engineers, chemists, physicists, and their assistants, plant-administrative and production-supervisory personnel, and courses for trainers and supervisors. A chart showing the kind of training, scope, purpose, and source is presented in *Education for Victory*, a biweekly published by the U. S. Office of Education.[3] In the January 15 issue of this

[3] *Education for Victory*, Vol. 1, p. 8, January 1, 1943. U. S. Office of Education.

publication is a list of correspondence courses offered by the War Department Army Institute, which enables the soldier to continue his high school work and at the same time prepare for promotion in the service.

High school youth are bewildered by the variety of job offerings, and they require guidance in selecting a particular training center. This need not be in their own community, because the best type of training for some youth might be that given by the Vocational Training for Rural War Production Workers (OSYA). In addition to these training agencies, a number of private vocational schools have come to the fore with various claims. The counselor will have to teach youth how to evaluate these commercial trade schools,[4] because in some states these schools do not operate under a state license while in others they conform to standards set by the State Department of Education.

Within the past few months many employing organizations have found it difficult to secure enough workers and so have advertised through the press and the radio that they will pay workers while in training. This in some instances has lured young people away from the schools. They say, "Why not get paid while learning?" or, "Why don't the schools prepare us for these specific war jobs rather than give us a lot of general stuff?" If we wish to keep the promising youth in schools, we shall have to marshall some strong arguments such as these: The training program of the school may be more diversified, while the training program in a plant prepares for one specific job. It is also probable that the person who accepts a job with pay while in training will stay at that unskilled wage longer, but if the individual acquires some special skill before entering a factory, he will start with a higher wage and will probably have a better chance for promotion.

The vocational counselor occupies a unique position in many school systems because he may be the one to determine who should and who should not take certain special training courses. Individuals with special abilities must be identified and diverted from tasks not demanding their full capabilities. They must be assigned to accelerated training to develop the highest level of attainment of which the nation may have need. In Philadelphia, a Trainee Acceptance Center serves the applicants for vocational training classes. Each applicant receives a physical examination, plus tests of visual and auditory acuity, verbal and non-verbal tests of mental ability, plus arithmetic measures, one to three tests of mechanical comprehension, and usually eight tests of motor skills. The results are profiled and evaluated by the vocational counselor. If the candidate is accepted, he lays out a plan of training in consultation with the counselor.

INVENTORY CARDS

Today, as never before, it is essential to have some type of inventory

[4] See in this connection Marshall, Thomas O., Jr., "Gyp Training Schools." *Occupations, The Vocational Guidance Magazine*, Vol. 17, pp. 197-202, December, 1938.

record that shows a student's achievements in academic fields, extracurricular activities, hobbies, work experience, and special abilities. No skill, no knowledge, no potential aptitude should be wasted. As these young people leave school, they should carry such a record with them and show it to the employment manager of the factory, the interviewer of the U. S. Employment Service, or the classifying officer in the armed forces. This should sharpen the interviewing procedures and expedite the placement of the individual in the type of work where he can make the maximum contribution.

Several such record cards have been developed. Dr. A. S. Lewerenz has developed a wartime inventory for the Los Angeles High Schools.[5] Dr. H. B. McDaniel[6] has developed a little more complete record in connection with the unit given in the social studies class in the San Diego schools. The last two days of this unit are devoted to making this inventory of abilities and plans for each student. The planning section of the record constitutes the desired outcome for such a unit and the formulation of a plan for personal participation and approval.

Another record with which high school boys should familiarize themselves is the soldier's Qualification Card. It follows the individual through his entire military career and it is his most important record while in the Army. The "Counselor's Wartime Manual"[7] suggests that the counselor mimeograph a copy of the card which is reproduced in the manual and give the boys practice in filling it out so that they will know how to make their assets and skills known when they report to the Reception Center.

SCHOOL FILES FOR WAR SERVICE

Since most school files are not organized according to the various abilities possessed by their students, it might be necessary to set up a file of "Potential Ability for War Service." The categories that have been suggested for this file[8] follow the classification of the *Dictionary of Occupational Titles*, Part IV, which is used by the U. S. Employment Service, the Army Classification Officers, and the questionnaires sent to all males registered with the Selective Service Commission. These categories are: (1) Professional, Technical, and Managerial Work. (2) Clerical and Sales Work. (3) Service Work. (4) Agriculture, Fishery, and Forestry Work. (5) Mechanical Work. (6) Manual Work. (7) Ability to Lead Other People. (This last classification is not

[5] "A Wartime Inventory—Appraising Individual Assets for Service." *Occupations, The Vocational Guidance Magazine* (Whole issue: Vocational Guidance for Victory), Vol. 21, Chap. XIII, pp. 88-89, September, 1942.

[6] McDaniel, H. B. "Guiding Youth to Service." *Occupations, The Vocational Guidance Magazine*, Vol. 21, pp. 363-368, January, 1943.

[7] "The Counselor's Wartime Manual." *Occupations, The Vocational Guidance Magazine* (Whole issue: Vocational Guidance for Victory), Vol. 21, Chap. IV, pp. 27-33, September, 1942.

[8] A plan for organizing an attack on making available in-school enrollment for war service. Mimeographed report of the Third National Conference of State Supervisors of Occupational Information and Guidance, Cambridge, Mass., August, 1942.

found in the Dictionary.) An individual may be classified under several of these headings, and this classification is important since an opening in the field of his first choice may not be available. Such a device will aid a school in making assignments to special training courses, will show what abilities are numerous and which ones are lacking in the student body. If there is a particular demand for certain abilities in a community, the school can take steps to bring the abilities of the students in harmony with the local needs.

The High School Victory Corps is another organization which calls for the cooperation of the counselor. While this program embraces the entire school organization, certain phases will concern the vocational counselor. The Office of Education now has in preparation some Victory Corps Guidance suggestions, and H. A. Jager gives plans in his article "Vocational Guidance Stressed in Victory Corps Program" which is published in the February issue of *Occupations*.[9]

In 1941 there was a one hundred per cent increase of 16-17-year-olds who sought work permits over 1940, and during the first three months of 1942 the number doubled. Since then, the Department of Labor has officially sanctioned it as a national policy for 16-17-year-olds to work in war production plants. The lowering of the age at which youth can enter employment calls for sound vocational counseling in order that those who are entering their first jobs make as wise a choice as possible. This wealth of occupational opportunity is a privilege which was denied the former generation of high school students. The majority of youth who seek these jobs will need assistance in thinking through the problem of whether or not in the long run they will be of greater service through immediate employment or by remaining in school and receiving training commensurate with their capacity to learn.

"*But*—what does the eighteen-year-old say? *My whole life has shifted focus, as if I were in a plane making a landing and the world tilted to meet me. It's ironic, but it's taken a war to give me an objective. Growing up as we did in depression years, the question has been not 'What would you like to do?' but 'What can you learn that will give you some sort of future?' There didn't seem to be room in anything. Now, suddenly, there is room. Suddenly we are desirable, important citizens; we rate high as manpower in jobs and as manpower in the armed services. It sets you up.*"[10]

In gearing the work of the vocational counselor to the necessities of the day it is readily seen that greater demands have been made upon his services than ever before. New programs, new orders, and new experiences in a time of national emergency have tested the faith of all those who believe in a democratic way of life

[9] Jager, H. A. "Vocational Guidance Stressed in Victory Corps Program." *Occupations, The Vocational Guidance Magazine*, Vol. 21, pp. 445-447, February, 1943.

[10] "Thoughts of an Eighteen-Year-Old." *New York Times*, Magazine Section, Sunday, January 10, 1943.

and who have dedicated themselves to serving youth, and it is hoped that they will not be found wanting.

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What Would You Like to Learn? United States Armed Forces Institute, Madison, Wis. (Catalog listing correspondence courses.)

Crisis—the Chinese word is written with two characters, "danger" and "opportunity."

Essential Mathematics for the War Effort

WILLIAM D. REEVE

PROFESSOR OF MATHEMATICS, TEACHERS COLLEGE

From the time when it occupied a place of prestige in the curriculum of our fathers and even of our younger days, mathematics has been subjected to attacks from one quarter and another until recently when it was dropped as a required study from the schools in many states of the Union. It is not strange that this should have happened, because many teachers and administrators, in spite of suggestions for a modern course of study, persisted in teaching the more formal and less useful parts of the subject. Many people who attacked the subject may not have been capable of offering constructive criticism, but they at least knew that the study of mathematics was not paying dividends commensurate with the amount of time and energy being spent on its organization and teaching. It should be said in passing, however, that the teaching of mathematics has been no worse than that in the other great fields of knowledge, such as English and history. In other words, no one group of teachers has had a monopoly on stupid teaching. It can be found in every field. However, this fact does not minimize our obligation, or relieve us of responsibility, to improve the content and teaching of mathematics.

PRESENT NEED FOR MATHEMATICS

Our entrance into the war has resulted in a renaissance of mathematics, particularly in secondary schools. People everywhere now realize that a knowledge of at least fundamental parts of mathematics is necessary for the safety of the nation, and teachers and administrators everywhere are asking what should be done to reorganize mathematics and teach it better during the emergency. It is the purpose of this discussion to offer some constructive aid in this direction.

The realization that the nation as a whole was illiterate in mathematics, even in arithmetic, was made more acute by an announcement last year from Admiral C. W. Nimitz concerning the showing of certain entering freshmen in leading universities and colleges of the United States. He said:

> A carefully prepared selective examination was given to 4,200 entering freshmen at 27 of the leading universities and colleges of the United States. Sixty-eight per cent of the men taking this examination were unable to pass the arithmetical reasoning test. Sixty-two per cent failed the whole test, which included also arithmetical combinations, vocabulary, and spatial relations. The majority of

failures were not merely borderline, but were far below passing grade. Of the 4,200 entering freshmen who wished to enter the Naval Reserve Officers' Training Corps, only 10 per cent had already taken elementary trigonometry in the high schools from which they had graduated. Only 23 per cent of the 4,200 had taken more than one and a half years of mathematics in high school.

This same lack of fundamental education presented and continues to present a major obstacle in the selection and training of midshipmen for commissioning as ensigns, V-7. Of 8,000 applicants—all college graduates—some 3,000 had to be rejected because they had had no mathematics or insufficient mathematics at college nor had they ever taken plane trigonometry. Almost 40 per cent of the college graduates applying for commissioning had not in the course of their education taken this essential mathematics course.

The experience which the Navy has had in attempting to teach navigation in the Naval Reserve Officers' Training Corps Units and in the Naval Reserve Midshipmen Training Program (V-7) indicates that 75 per cent of the failures in the study of navigation must be attributed to the lack of adequate knowledge of mathematics. Since mathematics is also necessary in fire control and in many other vital branches of the naval officer's profession, it can readily be understood that a candidate for training for a commission in the Naval Reserve cannot be regarded as good material unless he has taken sufficient mathematics.[1]

What Admiral Nimitz had to say was known by the leaders in the field of mathematics to have been true long before 1942, but it took a world crisis to make some people realize it.

[1] "The Importance of Mathematics in the War Effort." *The Mathematics Teacher*, Vol. 35, pp. 88-89, February, 1942.

Lieutenant Commander Paul C. Smith recently said:

> . . . the Navy asks that you encourage every male student under your supervision, who has the slightest aptitude for such subjects, to take an absolute minimum of two and one half years of mathematics. Teach him algebra through quadratics, plane and solid geometry, and trigonometry. Ground him well in chemistry and physics. Give him practice in machine shop work, foundry work, metalworking, woodworking, and internal combustion engineering.
>
> The most important group, because it is the most basic, is mathematics. I hope I won't offend any of you distinguished educators when I say that I personally loathe mathematics. But, as a naval officer, I recognize how essential it is.[2]

On the other hand, it seems clear that the armed forces do not want teachers to try to teach a great deal of advanced technical mathematics beyond what may be called *the essentials*. As we shall see, the main things to be added to the present course should be easy, sensible, and realistic applications of the various branches of the subject to the problems of the Army, the Navy, the Air Corps, and to war industries. According to Colonel B. W. Venable:

> The high school is not faced with a depletion of male students to such an extent as is the college. You will not be required to dress up a lot of subjects in uniforms and parade them through catalogues as decoys to get students. Your algebra will not have to be starred as

[2] Smith, Paul C., Lieutenant Commander, United States Navy. "The Navy and Schools." *The Mathematics Teacher*, Vol. 35, p. 249, October, 1942.

defense algebra, nor will your physics have to be called military physics. Yet you are desirous of doing your part and I can assure you that the War Department considers it most important that the high school student take advantage of every minute of education available to him now and in the future, eventually including a college course. If there must be a fanfare and military glamour present to attract, then let's have it; but the War Department hopes that the normal educational activities of the high schools will be interrupted as little as possible. It is still believed that a healthy training of mind and body is the best contribution the schools can make. The War Department cannot ignore the value of other subjects in Pre-Induction Training, but there are many subjects, dressed in khaki sometimes, that will have little or no application in the service, and we would like to offer a request that you not temporize with the situation, that you not stampede in all directions seeking some magic course because you will very likely find you have the essentials already in your curriculum.

In the complex pattern of modern warfare, the Army—somewhere in its intricate functioning—makes use of the results of nearly all human knowledge and research. Therefore, all educational processes may be considered part of a comprehensive military training. Actually, Pre-Induction Training starts in kindergarten and ends with induction, as almost every experience is a lesson.

The normal processes then of education need little or no adjustment to become valuable to our National effort. It is not so much the increase in number and variety of subjects available to the student as it is placing the proper emphasis on those courses already established that have a practical value, and teaching them in a practical way. More effort should be required of the student. A higher standard should be set. Lots of home work and midnight oil to the effect that A's and B's will sprout where C's and D's have flourished heretofore.

The War Department believes that purely military training can best be done by the Army itself after the soldier is enrolled. The Army has excellent schools teaching all the special subjects, and its methods of teaching the most elementary duties are up-to-date. All men accepted into the Army have had some Pre-Induction Training and their progress in their new profession will reflect that training. Army training for the vast majority of our soldiers is simple and highly repetitious. The technique of most of the weapons is learned by rote. When we enter the realm of tactics, which is the essence of the art of war, we realize the need for imagination and ingenuity in the private soldier and especially in the leader.[3]

We should all fervently hope and work for a world in which differences among nations will be settled by other means than aggression and war. Here it must be recognized that the task of rebuilding the world calls for as much preparation in the essentials of mathematics as does the present struggle. To quote Commander Smith again:

Yes, mathematics—and science and manual subjects as well—are acutely necessary in the Navy. But they will be equally necessary in the peace that follows. The forces of destruction that have been unleashed upon the world have been planned by the most scientific minds in the world. The minds which rebuild after this destruction must be equally scientific and even more ingenious. It will take educated and trained men to heal civilization's wounds.[4]

[3] Venable, B. W., Colonel, General Staff, War Department, Washington, D. C. "Education in the War Economy." *The Mathematics Teacher*. Vol. 35, pp. 243-244, October, 1942.

[4] Smith, *op. cit.*, p. 250.

THE FUNDAMENTAL SKILLS

The fundamental arithmetical skills with integers, both common and decimal, has been so generally accepted as a part of the training of every American citizen that we should expect all pupils who go through our elementary schools to exhibit proficiency in such skills and in their application. However, our pupils have been cheated. Many of them have been poorly advised, and the result is a large number who are woefully deficient, as the tests all show. This is no place to enter into a discussion of the reasons for this sad state of affairs or to try to place the blame where it belongs. We must not permit such a situation to continue where boys and girls do not receive instruction in mathematics commensurate with their ability to receive it and in line with the need of society for them to know it.

Now when someone remarks that the Army, the Navy, or the Air Corps says that certain conditions exist and that this or that thing should be done about it, what does he mean? He probably means that some individual among the Army or Navy personnel gave such and such an opinion about the situation. However, we know in general that the armed forces think that the proper teaching of mathematics and science has been neglected in the school, and the preceding quotations are representative of the attitude toward what should be done in mathematics in the secondary schools. The attitude of the leaders in the field of Civil Aeronautics is quite similar. They feel that the main business of the teacher of mathematics is to teach a modern course in the fundamentals of mathematics, general mathematics, if you please, making such use of these fundamentals in applications[5] to science, air and marine navigation, and war industries as time and the ability of the teacher permits.

An excellent basis for such a course will be found in the report of the Joint Commission of The Mathematical Association of America and The National Council of Teachers of Mathematics[6] for the mathematics of the secondary school. This report also gives an excellent discussion of the equipment of the mathematics classroom that is necessary for good teaching.[7]

SUGGESTIONS FOR SEQUENTIAL COURSES IN MATHEMATICS

Insofar as the sequential courses in mathematics regularly taught in the secondary school are concerned, teachers should do three things as follows:

[5] *A Sourcebook of Mathematical Applications.* Seventeenth Yearbook of the National Council of Teachers of Mathematics. Bureau of Publications, Teachers College, Columbia University, New York, 1942. (This book is excellent for supplementary teaching materials.)

See also a very helpful book for supplementary applications by George Osteyee called *Mathematics in Aviation.* The Macmillan Company, New York, 1942.

[6] The Report of the Joint Commission of The Mathematical Association of America and The National Council of Teachers of Mathematics on *The Place of Mathematics in Secondary Education.* Fifteenth Yearbook of the National Council of Teachers of Mathematics. Bureau of Publications, Teachers College, Columbia University, New York, 1940. See pp. 246-253 for "Grade Placement Chart."

[7] *Ibid.*, pp. 238-345.

1. Omit all obsolete material.

2. Add certain important things to bring the courses up to date.

3. Make use of applications of the essentials to genuine problems in the fields of science, industry, air and marine navigation, or other work of the armed forces. What is added and what is done in the way of applications will necessarily depend upon the time at the disposal of the teacher.[8]

In *arithmetic*, for example, we should *omit* the following:

1. Much of the work in common fractions as of no practical use any longer and as discouraging, meaningless, and unnecessarily difficult for children. In many cases difficulties can be avoided by replacing the common fraction by a decimal, as in the formula $F = 1.8\,C + 32$.

2. A great deal of the work with decimals, including addition and subtraction of "ragged decimals," and the useless cases in multiplication and division.

3. Such parts of work in denominate numbers as are no longer used. At the most two denominations are sufficient, as in 2 ft. 4 in.

4. Square and cube roots except by trial and error methods and by the use of tables. The theory belongs in algebra, if anywhere. In war courses the theory of square root may be needed.

5. Such extended computations as have no applications within the child's range of knowledge. This includes difficult and discouraging work in the mechanics of multiplication and in long division.

This suggestion of elimination does not mean the lessening of time allowed to the subject. On the contrary, it means the replacing of the useless material by that which belongs to the twentieth century instead of the seventeenth. The nature of this new material will possibly require even more time than the old, although this will probably be unnecessary for the average pupil who does not stand in need of the arithmetic of special fields of commerce, industry, and other technical lines. Material should not be omitted solely because of its age.

In *arithmetic* we should *add* the following:

1. The story of our numerals, not to learn but to enjoy; not extensive but as related to the growth of knowledge.[9]

2. Applications to school and home life, with problems actually brought in by the class.

3. Similarly, applications to the social and civic life of the class. These are easily used to advantage as soon as the elimination of useless material allows time for the real problems of

[8] In some schools teachers of ability and practical experience as pilots are giving training in air navigation to groups of pupils who know definitely that they wish to go into the Air Corps and who have three years or more experience in mathematics beyond the eighth grade. But such advanced technical courses should be offered only where it is clear that they can serve a good purpose and where the teacher is properly qualified to do the work. See Lillian Moore, "Aerial Navigation." *The Mathematics Teacher*, Vol. 35, pp. 99-101, March, 1942.

[9] See *Numbers and Numerals* by David Eugene Smith and Jekuthiel Ginsburg. Bureau of Publications, Teachers College, Columbia University, New York, 1937.

home life (cooking, cost of gas or electricity, cost of heat, and the like), games, and what in general may be called "the arithmetic of environment." Considerable progress has been made in this field, but much more can be made if we save time as suggested.

4. The use of simple algebra from grade seven on, as an aid to the solution of problems of the kind mentioned.

5. Informal geometry[10] as a part of arithmetic from grade six on.

Much of the above is concerned with the correlation of arithmetic and elementary algebra. The failure to realize that there is no definite boundary between the two is also a relic of two centuries ago.

In *algebra* we should *omit* the following:

1. Most of the present work in the operations with polynomials, such as have no application in social life, in ordinary business, and in science. These are relics of two or three centuries of wasted energy. (The work in factoring is one of the worst examples of "deadwood." It should be limited to the simple case of "taking out a common monomial factor" so far as the work of the ninth grade is concerned.)

2. Most of the difficult and artificially applied problems, the time saved to be given to work mentioned below.

3. Elaborate cases of simultaneous equations, especially such trick solutions as have no application to science, military affairs, or industry.

[10] See page 79 of the Report of the Joint Commission (Fifteenth Yearbook) referred to on page 330 as to the nature of this work.

4. All quadratic equations (in the ninth grade) except the pure quadratic as in $A = \pi r^2$.

In *algebra* we should *add* the following:

1. A much greater use of the equation in the manipulation of formulas actually needed in connection with (*a*) Physical problems, the meaning and significance of which are within the grasp of the pupils. (*b*) Commercial problems. (*c*) Problems relating to social activities—graphs, investments, support of government, budgets, household interests.

2. Series as related to pupils' interests—population, compound interest, physical problems, simple computations by logarithms (leading to the explanation of the slide rule), and other social needs.

3. A more purposeful use of the idea of function, of dependence of one quantity upon another—in particular, such dependence as relates to business, to science, to military affairs, and to the problems of daily life.

4. A more intimate relation of physical problems to algebra as has long been cultivated in European schools and as is suggested in 1 (*a*) above. Lack of this recognition is one of the greatest weaknesses in the teaching of algebra in America. To overcome it requires a radical departure from the present training of teachers of mathematics. Our teachers of the entire subject must know more of science and of the applications of mathematics to the life of the twentieth century.

In *geometry* it will be necessary to *omit:*

1. About two-thirds of the traditional propositions. The real purpose of logical geometry can better be fulfilled by retaining only the basal propositions, introducing more original matter, and reducing the deductive aspects of the course for many of the pupils.

2. All emphasis on remembering definitions and statements of propositions, thus replacing mechanical methods by real thinking. In particular, abandon all attempts to define the indefinable and minimize the ultra-logical beginning of geometry.

In *geometry* we should *add* the following:

1. A modern beginning, establishing the truth of the propositions informally. This movement is already under way.

2. A more carefully planned use of models made by the pupils so as to have geometry seem more closely related to real life.

3. A large number of applications to science. Here we have hardly made a beginning.

4. A large number of abstract exercises, applying logic to new situations. Here we have already made a fair beginning.

5. The idea of generalizing propositions, especially in the study of varied shapes of the standard figures. This will introduce the negative line, angle, and area, opening up a field of interest new to the pupils. For this we need much better trained teachers, not only in the theory of education but also in the modern field of geometry.

6. A large number of applications to the new science of Air and Marine Navigation.[11]

In *trigonometry* we should, except for pupils who show unusual ability, *omit:*

1. Those parts of the subject rarely used except in the highest computations of astronomy. I refer to a considerable part of the work in trigonometric equations, to the formulas for half-angles except where real applications are available, and much of the work in identities.

2. Trigonometric formulas in general except as needed in ordinary work in physics and elementary astronomy.

In trigonometry we should also recall the fact that the subject is essentially a part of algebra and has relatively little relation to theoretical geometry. The elements of trigonometry are much easier and certainly more interesting than the relatively useless material which should be dropped from high school algebra.

In *solid geometry* we should *omit* the following:

1. All demonstrations except those relating to lines and planes in space. Even here the work can be made more informal by cutting down on the deductive aspects and making more use of models.

2. The metric properties which can now be treated informally in grades seven to ten.

[11] See A. D. Bradley, *Mathematics of Air and Marine Navigation.* American Book Company, New York, 1942.

See George Osteyee, "Mathematics in Aviation." See also The Seventeenth Yearbook of The National Council of Teachers of Mathematics referred to on page 330.

All pupils in the high school, girls as well as boys, should be advised to study mathematics according to their ability and needs. For some superior pupils or for those entering certain technical or professional lines of work this will mean four years. For the remainder of the pupils, two years of general mathematics if properly organized should suffice.

In the light of the facts at the present time, it seems that our greatest need now is to set up a one-year course in general mathematics which will contain the essentials (not too technical) that boys and girls who have had little or inadequate training in mathematics since the eighth grade will need to help win the war. It ought to be a two-years course, but there is not time for that. Let us hope that when the war is over, this emergency course may be expanded so as to conserve the best possible training for boys and girls who do not specialize in mathematics as a basis for further professional work.

What, then, should such a course contain? For explicit details the reader should consult the forthcoming issues of journals like *The Mathematics Teacher* and yearbooks of *The National Council of Teachers of Mathematics* which deal with such matters. Outlines and textbooks covering such a year's work are already beginning to appear and more will follow. Such applications of the essentials of mathematics referred to already may now deal largely with military matters, but, as noted above, they will be just as important in the days of peace which lie ahead.

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If a nation values anything more than freedom, it will lose its freedom; and the irony of it is that if it is comfort or money that it values more, it will lose that, too.

—Somerset Maugham

Cooperative Effort for Guidance in the Horace Mann School

CECILE WHITE FLEMMING

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THROUGH all the years of its existence the Horace Mann School of Teachers College has rendered a service to other schools by its demonstration of a sound educational program effective in its influence upon the lives of children. Continuously throughout a period of more than half a century, this school has been studying and experimenting to determine anew the experiences "which constitute a best possible education at a given time for a given group of children."[1]

To those who have known Horace Mann School intimately, especially during the past twenty years, two things appear most significant in the work of the staff: every teacher and specialist alike has a genuine and continuing interest in the individual child and all work together in the closest cooperative effort to know each child and to help him to develop as fully as possible in terms of his potentialities.

This fundamental sincere interest in children as individuals has been the basic element in the educational program of the Horace Mann School. The total effort of the staff has been to provide a positive unified program of guidance for all pupils.

Interested observation and study of every pupil by the homeroom teacher, supplemented by information on physical condition and mental and emotional health, obtained by the physician and the psychologist, have contributed to a knowledge and understanding of all children under the teacher's care. Such knowledge and understanding have made possible the wise direction of individual tendencies, and have contributed to an early awareness of incipient difficulties and prompt remedial effort to meet needs already manifest.

Such an inclusive program concerned with every child—those who have no special problems as well as those who need preventive care or remedial treatment—has been established in too few schools. Some with fine intent have added to their organization certain services in guidance which too often have been confined to corrective work for long-existing prob-

[1] Report of the Horace Mann School in the Eight Year Study of the Relation of School and College. Submitted by the Staff, October, 1940. (Mimeographed.)

lems. In many instances the "specialist-in-guidance," whether he be psychologist, dean, counselor, or remedial instructor, and the class teacher work in too great isolation from each other. The special worker is not in close vital contact with the actual everyday needs of teachers and pupils, and the teachers remain unaware of or indifferent to the help to be had from the special worker.

Even with a greatly increasing interest in "child study" on the part of research students, teachers, and parents during the past thirty years and a steadily growing science of individual development, too many administrators and teachers are still concerned primarily with the curriculum as a body of subject matter and with methods of instruction productive of factual knowledge; too little interested in the individual children themselves for whom the school exists.

THEORY AND PRACTICE IN GUIDANCE

Program Conditioned by Educational Philosophy and Purposes. Horace Mann administrators, teachers, and specialists believe that the effectiveness of their total effort for the direction of children's growth requires of all a clear conception and a harmonious acceptance of certain essential educational beliefs and purposes which might be characterized as the philosophy and objectives of the school.[2] Allowing for the utmost freedom of individual judgment and initiative on the part of teachers in their own practice of a fundamental philosophy, the teachers and specialists of the Horace Mann School consider that certain beliefs and practices in the school condition basically the success of their efforts in directing the growth of children.

The motivating purpose of the Horace Mann School is to give children educational experiences that provide a full life in the present and develop them for effective contribution to the society of which they, as adults, will be a part. The hours spent in school must be for the child real and vital, filled with experiences that bring immediate satisfaction as well as prepare for future living.

At the same time the staff recognizes that education is a continuous process influenced by the innumerable impacts of modern civilization and that school is but one of the elements and agencies contributing to a child's total education. Without the close day-to-day relationship with parents which characterizes this school and without close contact with the community of which a school is a part, education cannot be complete nor the school adequate in its contribution to the total process of learning and growth.[3]

The Horace Mann staff, in its emphasis upon understanding and appreciation of child development as essentials for an adequate educational

[2] *Teachers College Record*, Vol. 36, May, 1935. (Whole issue: The Horace Mann School at Work).

[3] Report of the Horace Mann High School. Submitted by the Staff to Dr. M. C. Del Manzo, Director of Educational Demonstration and Public Service, Teachers College, Columbia University, May, 1939. (Mimeographed.)

program, realizes how varied are the aspects of that development which must be provided for in the educational program.[4]

Teachers and administrators engaged at Teachers College in the study of individual development and guidance, have, in conference with the writer during the past several years, expressed keen interest in Horace Mann's co-operative service for the guidance of children.

Each year the more thoughtful and penetrating questions asked during lectures or in the course of group discussions or individual interviews have included queries on the purposes, activities, and results of the school's effort, such as the following:

1. What do you try to accomplish for the children of Horace Mann School in your program of cooperative service for guidance? With what phases of a child's development are you concerned and what activities are involved?

2. How do the several members of your staff work together? What is the role of teacher, physician, psychologist, librarian, principal, the home, community agencies?

3. What organization of staff effort and what mechanics of organization facilitate cooperation and help to make it effective?

4. For what purposes do you use mental and achievement tests? What tests do you use?

5. How do you observe and study your children? In what ways other than the use of tests do you measure and estimate their growth?

6. What kinds of records of pupil growth do you keep? How do you report to parents?

7. Does the Horace Mann effort for individual and group guidance contribute to the evaluation of the school's total program? How does such effort help to evaluate the curriculum?

More space than that available for one article would be required for an illuminating and adequate answer to all of these inquiries. It seems best, therefore, to attempt in this presentation to consider the vital purposes of the program; certain elements of staff organization that facilitate cooperation and help to make it effective; ways and means of learning about children and their potentialities for growth; and some results accomplished in the co-operative effort to stimulate and guide development.

COOPERATION FOR GUIDANCE

Character and Scope of Program. Since the principals, teachers, and specialists alike believe that the development of children is many-sided and that the school program must contribute to growth in these several phases, they also have believed it essential to know the children under their care as fully as possible in terms of their varied potentialities and limitations and to stimulate and guide de-

[4] Reynolds, R. G. and Harden, Mary. *The Horace Mann Plan for Teaching Children.* A Horace Mann Professional Book. Bureau of Publications, Teachers College, Columbia University, New York, 1932, p. 4.

Teachers College Record, Vol. 36, May, 1935. (Whole issue: The Horace Mann School at Work).

velopment through rich experience and appropriate activities. They are convinced that a cooperative effort by several workers, all interested in an individual child or a group situation, each equipped to make special contribution to the question under consideration, is most productive, both in results sought for children and in increased interest and knowledge for the workers themselves. In the positive program of guidance for all pupils in the school and in attention to special problems and needs, members of the staff are concerned with all phases of child growth—physical, intellectual, emotional, and social. They consider every type of activity in the school program, whether learning in classroom, studio, and shop and on the playground, or social living in hours of work and in recreational activities. They take account of and utilize every kind of success: achievement in knowledge and skills, demonstration of special talents in the arts, ability in physical activities and sports, growth in methods of work and in powers of self-direction and control, evidences of understanding of people and ability to lead or direct others in social activities and in practical everyday activities of democratic living.[5]

Significant Role of Homeroom Teacher. The regular class teacher in the Elementary School, the homeroom teacher in the High School, is the critically important person in the Horace Mann program for individual guidance. She has greater opportunity than any other member of the staff to know the pupils in her charge both as members of a group and as individual personalities. She, too, spends more time with them and works with them in a greater variety of activities and experiences than does any other teacher or specialist. Of course every other teacher makes an essential contribution to the experience and guidance of pupils and each special worker has his own responsible role. The specialist is the service aide who supplements the homeroom teacher's knowledge by vital information which the instructor has neither the technical equipment nor the time to obtain. The homeroom teacher is the chief liaison officer for school and home. Her genuine concern for each individual in her class group impels her to observe and study each child carefully as she proceeds through the day's activities.

These teachers, possessed of a knowledge of child development and of professional skill much beyond the average, are continuously alert to evidences of individual growth and aware of the significance of such indications for children of the age and grade with

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[5] Aldrich, Grace L. and Flemming, Cecile White. "A Library in Action in a Modern School." *Teachers College Record,* Vol. 38, 389-404, February, 1937.

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which they work. Informed as to normal trends in phases and rate of growth, they are quickly observant of deviations from normal tendencies and of behavior symptoms of physical, mental, and emotional disturbances.

Upon the basis of her own observations and questions, the homeroom teacher may call very early for the help of the physician and nurse in the Health Office and request the psychologist to aid in the diagnosis of a child's condition. At other times she may talk with teachers in special areas who have the pupil in their classes and with the recreation leader. She may herself go to observe the pupil in other activities which show special abilities or limitations or perhaps reveal emotional tensions and significant social attitudes. She will, of course, refer to the cumulative records for the child on file in the principal's office. The librarian is often able to make illuminating comment not only with respect to a pupil's ability in reading, his methods of study and habits of work, but also on his social behavior when he is in the library. To aid in determining a child's need and appropriate help, the psychologist may be asked to use special tests and diagnostic techniques and to make careful and extended observation in all the situations and activities in which the pupil is engaged. Obviously all information on file in the psychologist's office concerning a pupil or a class is utilized before additional checks are made.

The homeroom teacher may be the first to report a special problem, ask for help from other teachers and specialists, and later request the principal to call into conference all who work with a pupil or group about which she is concerned. A parent may also be asked to attend the conference though usually the parent is consulted before such a conference is arranged. More often the principal asks a parent to come to the school to consider with her, and with the homeroom teacher and the psychologist, the problem in hand and staff judgments and suggestions for help.

Freedom of Initiative and Action. In many instances some other staff member may initiate special action on an individual problem or group situation: it may be a teacher in the arts or in some other area; frequently the psychologist in her observation of a class group may first raise questions concerning a particular child or the behavior of the group; and in the same way the physician or nurse may be the first to learn of a condition which affects a child's adjustment and success, and report such discovery to the homeroom teacher, the principal, and the psychologist.

At times certain characteristics or tendencies may affect an entire class so that it is economical of time and effort to have the principal call a conference of teachers, recreation leaders, and specialists to consider the situation.

It is important to note the freedom of action and the confidence with which any member of the Horace Mann staff may thus report her concern about a particular situation and enlist the help of her fellows. Such cooperative effort is made possible by

sound professional equipment for the work in hand, by confidence in the sincerity of one another's interest in helping children, and by the respect of each for every other's ability and willingness to help.

Coordination of Effort in High School. In the High School the homeroom teacher and adviser is also a subject teacher for her homeroom group. Serving in these two functions extends her opportunity to know the students and to contribute to their development through both her teaching and the social activities of the homeroom. During the past ten years each homeroom teacher in the High School has called together at intervals the teachers concerned with her group to discuss the school progress and social development of the group as a whole, to report experiences with and estimate of individual girls and to consider how they may contribute most effectively to individual growth. The principal has regularly attended these conferences as have also the director of individual development and guidance and a representative from the Health Office. The last-named two have contributed to the consideration of individuals from their specialized experience and from records of physical and psychological tests. Often the librarian also is present.

The first conference of this kind is usually held about six weeks after the opening of school when records of physical examinations and scores on initial tests of mental aptitude, reading, and achievement in English are available and instructors have become sufficiently acquainted with their students to have impressions and estimates of some value. A second conference to consider a given class group may be scheduled for midyear and a third in March or April. Though such meetings, each attended by eight or more staff members, may seem to many schools too demanding of time and energy, the Horace Mann teachers have found them to be one of the most productive and stimulating ways of obtaining vital information and unifying their efforts to work constructively with both groups and individuals.

Special Services of Physician and Nurse. As stated earlier it is the conviction of the staff that they are charged with the responsibility of teaching the children who attend this school to live richly and happily in the environment of today while they are at the same time being equipped for effective and satisfying living in an adult society. The work of the physician and nurse gives vital help in the staff endeavor to have children experience a rich and satisfying life in the present.[6] In addition to providing protection against communicable disease, the medical office gives every child a careful physical examination at the beginning of each school year with subsequent check-up as needed. The cumulative record of these examinations, with the inclusion of notes on recommendations and remedial measures, gives information essential in the study of individual pupils. The way in which the physician and nurse retain

[6] See the third and fourth references in footnote 5.

a personal knowledge of and interest in each child and each home increases greatly the value of their reports to class teachers and of their recommendations in the consideration of individual children.

Contribution of Division of Individual Development and Guidance. In the period from 1930 through 1940 the author served as the director of the service first designated as the Division of Pupil Adjustment and later as the Division of Individual Development and Guidance. In addition to the maintenance of a broad and varied psychological service, the Division was vitally concerned with the mental and emotional health of every child in the school, cooperated in the diagnostic study of individual problems, and helped to make understanding studies of serious "cases." The director aided in both the determination and the application of remedial measures and shared with the homeroom and other class teachers the supervision of staff and student remedial workers. During this eleven-year period the Division served as a coordinating office to assemble, organize, and make available in written report to those concerned, all the information on file or contributed by homeroom teacher and other staff members to the study of a group or individual problem. Such coordination of information and effort was a service delegated to the director of the Division by the principal of the school to be maintained in closest relation with and as an adjunct to the offices of the assistant principals of the Elementary School and the High School. During the years 1941 and 1942 changes in the organization of the Horace Mann School connected with the merging of the Teachers College Schools into a single institution led to the dissolution of the Division of Individual Development and Guidance. The psychologist's work continues and she serves as a consultant in guidance, working as closely with teachers as before. The function of final assembling of information and reporting to other staff members and to the home is now the responsibility of the principals of the Horace Mann Elementary School and of the Horace Mann Girls Division of the Horace Mann-Lincoln School.

In its psychological service the Horace Mann School has always used the best mental and achievement tests available[7] and has utilized the best psychological knowledge and practice to contribute to its positive program of guidance for all its children; to aid in analyzing children's abilities; to anticipate potential development; to aid in directing learning; to help in diagnosing problems—all to the end of achieving more effective instruction

[7] Accepted tests of mental aptitude used regularly have included the Revised Stanford-Binet (Terman-Merrill), Merrill-Palmer, Pintner-Patterson Performance, Otis Classification Test and Primary Group Test, Terman and Terman-McNeary Group Test of Mental Ability for high school pupils, Otis Self-Administering Higher Examination, and for senior high school students, the Thurstone Psychological Examination adopted by the American Council on Education.

Achievement Tests most used in recent years have been the Progressive Batteries, Primary and Elementary, the Revised Stanford Examinations, the Iowa Reading Tests, and the Cooperative Tests of Reading, English, and Mathematics.

and better social guidance.[8] Data from an annual survey of achievement, individual tests of aptitude for learning, systematic and scientific estimates of personal traits by teachers, and a variety of special tests for individual children aid in the diagnosis of individual needs and the development of remedial procedures.

MECHANICS OF STAFF ORGANIZATION

In addition to the conferences of teachers and other staff members of the Horace Mann School called to consider special problems in guidance and the conferences regularly utilized in the high school to consider particular grade groups as described above, several other types of group organizations and meetings strengthen staff relationships and facilitate cooperative efforts to meet the needs of children.

In the Elementary School the principal arranges a series of conferences, in October and November and again in May, attended also by the psychologist, to consider with homeroom teachers the progress and development of pupils in their respective class groupings. Such discussion calls attention early in the year to children who may need special consideration and help. It also gives to the principal and psychologist an understanding of the general character of each group as a whole and the program of instruction and social living in process of development. At the May meetings records of the April survey of achievements supplement the teachers' judgments of pupil growth in knowledge and in development of fundamental skills.

Other organizations and meetings which permit effective combination of interest, knowledge, and effort of individual staff members include the following:

Committees concerned with various phases of the school program all of which are basic to effective guidance, such as Curriculum, Promotion, Records and Reports and Direction of Study.

The service of advisers for extra-class activities and for the General Association of the High School.[9]

The organization of mothers of the children of each grade group for regular meetings with homeroom and class teachers to consider vital questions on the experience and development of their children.[10]

Conferences held by the principal of the high school with students, staff members, and parents in guidance for admission to college.

Staff meetings concerned with vital questions on fundamental phases of the school's service to its children.

[8] Report of the Principal of Horace Mann School to the Dean of Teachers College for the Academic Year Ending June 30, 1938.

Reynolds, R. G. and Flemming, Cecile White. "The Evaluation of the Horace Mann Program." *Teachers College Record*, Vol. 36, pp. 699-709, May, 1935.

See also the third and fourth references in footnote 5.

[9] Report of the Horace Mann School in the Eight Year Study of the Relation of School and College. Submitted by the Staff, October, 1940. (Mimeographed.)

See also the second reference in footnote 5.

[10] *Teachers College Record*, Vol. 36, May, 1935. (Whole issue: The Horace Mann School at Work).

DYNAMIC PUPIL RECORDS AND REPORTS

The Horace Mann School uses its records and reports as essential aids in maintaining close and intelligent cooperation with parents. The report to the home of the child's achievement, experiences, and growth in school is particularly important. The school is concerned with providing records and reports which present a picture of developing tendencies in the pupil as a dynamic aid to the teacher and the home. Such records portray children's growth through a continuous, integrated school experience, helping teachers and parents to trace change and development in achievement and personality and aiding them in contributing to such development.

The Horace Mann School, in common with numerous other progressive schools, is attempting constantly to extend and improve its system of personal records. The cumulative cards and the reports to the home for individual pupils have been in continuous process of revision for several years. The reports conform to the newer trend in school reports in their emphasis upon many factors other than academic achievement. They provide a record of judgments of achievement more objective and more accurately revealing than in earlier years. They are emphasizing a qualitative interpretation of each pupil's achievement with emphasis upon personality traits other than mental quality, and with concern for aspects of growth in addition to accomplishment in subject matter. The more extended use of the qualitative descriptive report is proving stimulating to parents and pupils, as well as giving constructive aid to the entire staff in instruction and guidance. A new analysis of achievement is used also to report to the home.[11]

The "clinical picture" of a pupil's personality and growth which can be presented by the combined thought and analyses of several teachers is a vital source of help in the solution of individual problems, whether in class work or social development. To estimate mental and social growth, the High School uses the new "behavior description" developed by the Committee on Records and Reports for the Eight Year Study.[12]

The summary of school achievement and other phases of development during a student's high school experience that is now sent with application for admission to college also utilizes the form developed for this purpose by the Committee on Records and Reports of the Eight Year Study.[12] The many phases of accomplishment and growth reported in this summary not only reveal the rich and varied experience in learning and living which the students of the school have, but provide a genuine aid toward guidance in college.

GUIDANCE AND EVALUATION

Since throughout its existence the Horace Mann School has sought to

[11] See the second reference in footnote 8.

[12] Smith, E. R., Tyler, R. W., and Others. *Appraising and Recording Student Progress*, pp. 9-504. Commission on Relation of School and College, Progressive Education Association. Harper & Brothers, New York, 1942.

improve its program and to demonstrate each year sounder and more effective educational practice, the staff has recognized its special responsibility for determining, as every good modern school must do, the worth of its program in terms of results attained in the growth and development of its children. Special effort to devise and use a definite plan of evaluation has been made during the school's participation in the Eight Year Study.

The question asked by teachers of other schools as to the contribution of the Horace Mann effort for guidance to a plan for evaluating its total program is readily answered when one considers the basic features of the cooperative work for guidance in relation to the essential elements in an adequate plan for evaluating the total educational experience provided by the school.[13] The first requirement for any adequate plan of evaluation is a clearly stated definition of the school's purposes; results must be checked against objectives to find out whether these purposes are being realized. It will be recalled that the initiation of special efforts to guide the growth of children and the character and scope of a cooperative program are conditioned by the educational beliefs and purposes of a school staff. The second step in trying to evaluate a school's work is to select and use appropriate methods and instruments (even devising new tests and other procedures, if necessary) to gather evidence of what the school is accomplishing. Obviously the many and varied ways of studying the behavior of children and of testing and recording growth used by teachers and specialists of the Horace Mann School to obtain greater knowledge and better understanding of individual achievement and needs are to be considered as current procedures in evaluation; and the results obtained contribute directly to evidence of the extent to which the school's purposes are being achieved. In fact, effective efforts at guidance require a continuous succession of alternating procedures in gathering evidence and making estimates of the changes in and growth of boys and girls in response to the experiences and direction provided by teachers. The only step remaining to incorporate the judgments used for guidance into the total accumulation of evidence of the functioning of the entire school program is to consider the evidences of children's growth in relation to the purposes set forth by the staff.

It is apparent, then, that such a cooperative effort for the guidance of children as that which has functioned in the Horace Mann School of Teachers College not only accomplishes the direct significant purposes for which it is designed but contributes continuously to evidence of the school's effectiveness—evidence which permits alternate evaluation and change for the continuing improvement of the educational program.

This article has considered the interest of the staff of the Horace Mann

[13] Harden, Mary. "Evaluating a School Program." *Teachers College Record*, Vol. 40, pp. 391-406, February, 1939.
See also the second reference in footnote 8.

School in the development of individual children, and their purpose to provide experiences and direction of growth which will assure the fullest development of each boy and girl in terms of his individual potentialities. The report has been concerned further with the efforts of the teachers, specialists, and principals of this school to work cooperatively; and with the organization of such efforts to learn as much as possible about the growth of children in terms of many phases of development by means of varied methods and instruments, and to utilize such knowledge most effectively to promote growth and to guide wisely. In the course of such cooperative study and action, almost every type of group situation and individual need has been dealt with, and nearly every type of experience and facility has been utilized to meet personal needs and enrich group and individual development. Such close working-relationships between teachers and specialists help toward the early discovery of special limitations or needs and the consequent prevention of undesirable tendencies, and thus facilitate normal growth. A program of this kind is a genuine economy for a school not only because it prevents suffering and waste effort for children and makes for their success and happiness, but also because it permits a more nearly normal progress of pupils and the most effective use of school facilities.

At this time when the secondary schools of the nation are changing their instructional programs to prepare students for participation in the war effort, accurate knowledge of student aptitudes and interests and careful guidance are more imperatively needed than in normal periods. The desire to serve one's country well is not, unhappily, sufficient equipment for successful work in mathematics and science and these subjects cannot be mastered expertly by every boy and girl. Evidence of aptitude for learning, of ability in reading, and other traits and skills are vitally necessary to prevent individual failure with consequent feelings of frustration and unhappiness as well as waste of human effort, time, and money.

Our eyes must be idealistic and our feet realistic. We must walk in the right direction but we must walk step by step. Our tasks are: to define what is desirable; to define what is possible at any time within the scheme of what is desirable; to carry out what is possible in the spirit of what is desirable.—SALVADOR DE MADARIAGA

A New Trend in Senior High School Mathematics

GORDON R. MIRICK

PRINCIPAL, AND TEACHER OF MATHEMATICS
LINCOLN BUILDING, HORACE MANN-LINCOLN SCHOOL

A PUPIL going through the American high school today and electing four years of mathematics would have his work arranged about as follows: ninth grade, algebra; tenth grade, plane geometry; eleventh grade, intermediate algebra with varying amounts of trigonometry; twelfth grade, trigonometry and solid geometry with possibly some algebra.

It is true that there are many modifications of this program in the various schools, but there is one outstanding characteristic of all programs, and that is the artificial line that is drawn between the subjects of algebra and geometry. A pupil sees algebra and geometry as two separate and distinct subjects without consideration for their interrelationships.

An interesting comment on the kind of geometry studied by pupils in our high schools is found in *The Queen of the Sciences* by E. T. Bell:

> To get some sort of perspective, let us consider roughly the kind of mathematics acquired by a student who takes all that is offered in a good American high school. The geometry taught is practically that of Euclid and is 2200 years old. It is a satisfactory first approximation to the geometry of the physical universe, and it is good enough for engineers, but it is not that which is of vital interest in modern physics, and its interest for working mathematicians evaporated long ago. Our vision of the universe has swept far beyond the geometry of Euclid.[1]

The need of a newer approach and of a change in the content of the geometry courses in our high schools is expressed in an address by Professor Oswald Veblen of the Institute for Advanced Study:

> It seems to me that elementary geometry should be presented in such a way as to prepare the student for the other sciences which he is to study later, and in which this very geometry is going to be used. This means that the methods of geometry should not be singular ones, peculiar to this subject itself, but should as far as possible be methods which can be used over and over again in the other branches of science. . . .
>
> The obvious thing to do is to recognize that we have a subject to present which has to do with physical reality. Let us approach it as any modern scientist would by first studying some of the observa-

[1] Bell, E. T. *The Queen of the Sciences*, pp. 7-8. The Williams & Wilkins Company, Baltimore, Md., 1931.

tions and experiments with which we have to deal, in crude everyday terms. This would correspond, I suppose, to the "observational geometry" which is already in our schools. After getting a start in this way, a scientist feels the need of a systematic language in terms of which to organize the phenomena. This language is mathematical analysis. In other words, as soon as the experimental basis is established, the study of geometry should proceed by the use of coordinates and the methods of analytic geometry.[2]

Let us consider what one should expect of a pupil at the beginning of the eleventh grade, or third year in high school, as a result of the study of algebra in the ninth grade and a study of geometry in the tenth grade. He comes to us after not having had instruction in algebra for fourteen or fifteen months. However, during that interval he has had mathematics in the form of a course in plane geometry. But that course has afforded him little opportunity to use the concepts and skills he developed in algebra and practically no opportunity to develop new concepts and skills.

The net result of all this is that at the beginning of the eleventh grade a typical high school pupil knows very little algebra. The fact is attested to by many teachers of mathematics and by tests that have been given from time to time.

In the *Tentative Outline of High-School Mathematics*, recently published by the Board of Education at Los Angeles, California, the fact is lamented that the continuity of algebra is broken by a year of geometry. The following is a quotation from the course of study:

> Algebra I, II, and III, which at present requires fifteen semester hours to complete, will be completed in twelve, and Geometry, which at present requires ten semester hours to complete, will be completed in eight. It is hoped that this gain in time will be realized through the continuity of Algebra. At present Algebra is interrupted with a year of Geometry. Also, some gain might be realized in eliminating duplications or treating them with greater speed. Such topics as ratio and proportion and trigonometric ratios which are studied in both elementary algebra and geometry might fall in this class.

We find in the *Preliminary Description of the Alpha, Beta and Gamma Examinations in Mathematics*, published by the College Entrance Examination Board, a number of statements such as the following that express the need for the pupil's understanding of the importance of the interrelationship of various subjects in mathematics:

> Each examination will be comprehensive in character, testing the candidate's appreciation of the significance of the separate subjects of secondary-school mathematics as well as his understanding of the important interrelations of these several subjects. . . .
>
> Sharp separation between Algebra, Geometry, and numerical Trigonometry will not be maintained. Understanding of the interrelations between these subjects should be part of the candidate's equipment.

Referring to the more advanced examination, Gamma, is the following statement:

[2] "Certain Aspects of Modern Geometry." *Rice Institute Pamphlet*, Vol. 21, No. 4, October, 1934.

The examination will not observe strict separation of the subjects Trigonometry, Solid Geometry, Advanced Algebra. Candidates will be expected to be able to use any one or more of these subjects in the solution of a problem with which they are confronted.

These considerations constitute a serious challenge to the present organization in the teaching of geometry and algebra in American high schools. The methods of investigation in demonstrative geometry are clearly too unrelated to the methods now employed in the study of the physical universe. As I see it, the need in tenth-grade mathematics is a course that retains a logical sequence, employs algebraic analysis as well as geometric synthesis, organizes algebra and geometry so that they mutually contribute to each other.

Among the many significant attempts that have been made toward a change in the approach to the whole question of geometry might be mentioned the work of an English mathematician, Sir Percy Nunn. Accounts of his work may be found in the *First and Second Reports on the Teaching of Geometry in the Schools*, prepared for the British Mathematical Association. Nunn's work replaces the Euclid Parallel Postulate by the Principle of Similarity. A work that also postulates a Principle of Similarity in somewhat the way Nunn has done is the textbook of G. D. Birkhoff and Ralph Beatley, called *Basic Geometry*.

In the preceding remarks I have mentioned the work of Oswald Veblen. His recommendations, as far as the initial start of plane geometry is concerned, are implied in the following quotation from his work:

> If you ask a modern mathematician or physicist what is a Euclidean space, the chances are that he will answer: It is a set of objects called points which are capable of being named by ordered sets of three numbers (x, y, z) in such a way that any two points (x_1, y_1, z_1) and (x_2, y_2, z_2) determine a number called their "distance" given by the formula:
>
> $$\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}$$
>
> I find it advantageous to start the work in geometry, making use as much as possible of the algebra and trigonometry developed in the preceding year.

In Unit I, I develop the rational numbers and the geometry of one dimension. In this unit the principal postulates are:

1. Two distinct points determine one and only one straight line.
2. If A and B are two distinct points on a line, then on any ray whose origin is point O, there exists one and only one point D such that $OD=AB$.
3. Line-segment AB=line-segment BA.
4. There is a one-to-one correspondence between equally spaced points on a line as one set and the set of positive and negative numbers and zero.
5. There is at least one point between any two points on a line.
6. A given line-segment can be divided into an integral number of equal parts.

The work of this unit shows that for every rational number there corresponds a point on the line, but leaves open for future consideration the question of whether every point on the line corresponds to a rational number.

In Unit II, which concerns itself

with definitions and concepts of angles and triangles, the following postulates are included:

7. If BAC is an angle whose sides do not lie on the same straight line, then on any ray, OX, whose origin is O, there exists one, and only one ray OZ on a given side of OX such that $\angle BAC$ equals $\angle XOZ$.

8. All straight angles are equal.

9. All right angles are equal.

10. Through a point on a line, one and only one perpendicular can exist to the line.

11. All equally spaced rays that have a common origin can be numbered so that their number differences measure angles.

12. The sum of any two angles of a triangle is less than a straight angle.

13. Through a point not on a line, at least one perpendicular can exist to that line.

Unit III deals with similar right triangles, the Theorem of Pythagoras, the angle sum, and the trigonometry of the right triangle. By this early introduction to such theorems as the Angle Sum and the Theorem of Pythagoras, many important exercises can be undertaken, and the Theorem of Pythagoras allows us to justify the inclusion of the irrational number and thus affords an opportunity to complete the study of real numbers begun in Unit I. Postulates in this unit are:

14. Two right triangles are similar if an acute angle of one is equal to an acute angle of the other.

15. There is a one-to-one correspondence between points on a number scale and the real numbers.

The theorems of this unit with their corollaries are given to indicate the different approach existing in this sequence to that usually found. The following theorems are given to draw the comparison:

1. Through a point not on a line, one and only one perpendicular can exist to the line.

2. The altitude from the vertex of a right angle in a right triangle to the hypotenuse lies within the triangle.

Corollary 1. At least one altitude of the triangle lies within the triangle.

3. In a given right triangle, the altitude upon the hypotenuse forms two right triangles which are each similar to the given triangle, and therefore similar to each other.

4. The sum of the two acute angles of a right triangle equals a right angle.

5. The sum of the interior angles of any triangle equals a straight angle.

Corollary 1. If two angles of a triangle are equal to two angles of another triangle, the third angles are equal.

Corollary 2. An exterior angle of a triangle is equal to the sum of the two interior angles not adjacent and is greater than either of them.

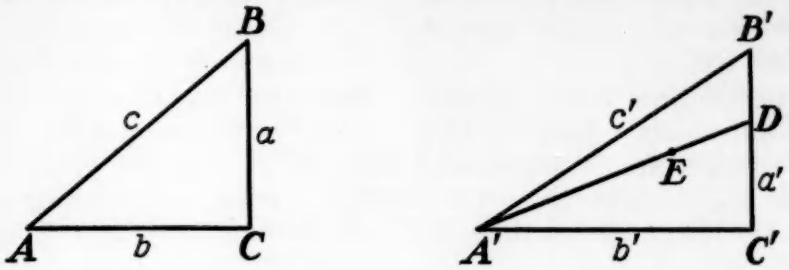
Corollary 3. If one angle of a triangle is a right angle or an obtuse angle, the other two angles are acute.

6. In a right triangle the altitude upon the hypotenuse divides the hypotenuse so that either leg is the mean proportional between the hypotenuse and the adjacent segment of the hypotenuse.

7. In a right triangle the altitude upon the hypotenuse divides the hypotenuse so that the altitude is the mean proportional between the segments of the hypotenuse.

8. In a right triangle the square of the length of the hypotenuse equals the sum of the squares of the lengths of the other two sides.

9. If in two right triangles the sides including the right angles are propor-



Given: Right $\triangle ACB$ and right $\triangle A'C'B'$ in which $\frac{b'}{b} = \frac{a'}{a}$

Prove: Right $\triangle ACB \sim$ right $\triangle A'C'B'$

Plan: Show $\angle A' = \angle A$

Statement	Reason
1. Suppose $\angle A'$ is not equal to $\angle A$. Let ray $A'E$ form with the side $A'C'$ an angle equal to $\angle A$. $A'E$ produced will meet $B'C'$ or $B'C'$ produced at some point D.	1.
2. Right $\triangle A'C'D \sim$ right $\triangle ACB$	2.
3. $\frac{DC'}{a} = \frac{b'}{b}$	3.
4. $\frac{b'}{b} = \frac{a'}{a}$	4.
5. $\frac{DC'}{a} = \frac{a'}{a}$	5.
6. $DC' = a'$	6.
7. Point D coincides with point B'	7.
8. $A'D$ coincides with $A'B'$	8.
9. $\angle DA'C' = \angle A'$	9.
10. $\angle A' = \angle A$	10.
11. Right $\triangle A'C'B' \sim$ right $\triangle ACB$	11.

tional, the triangles are similar. The proof of this theorem is given above.

10. Two right triangles are similar if the hypotenuse and a side of one right triangle are proportional to the hypotenuse and a corresponding side of the other.

These theorems open up a great deal of numerical work and further allow us to put the trigonometry of the right triangle on a logical basis.

Unit IV concerns itself with parallels and perpendiculars. Since we assume the Law of Similarity, Euclid's Parallel Postulate becomes a theorem.

Unit V discusses the analytical geometry of the straight line. This unit affords considerable opportunity

not only to develop more algebra, but to show the relationship between algebra and geometry.

Unit VI, which is mostly algebraic in character, concerns itself with the notions of variables, constants and functions, and considerable work is done in the graphs of functions, including the graph of the Sine Function, Cosine Function and Tangent Function as far as 180°. The Law of Sines and the Law of Cosines are proved in this unit and used constantly in the development of the work of future units. As an example of the use of the Law of Cosines, I am giving

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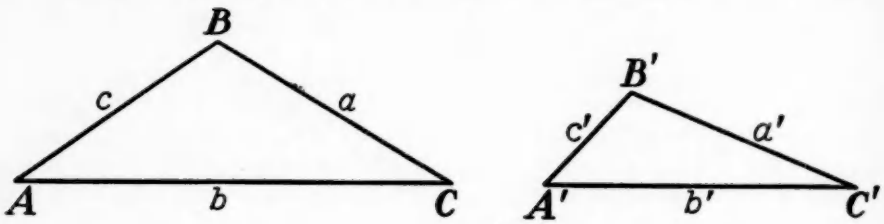
If two triangles have their sides respectively proportional, they are similar.



Given: $\triangle ABC$ and $\triangle A'B'C'$ in which $\frac{a}{a'} = \frac{b}{b'} = \frac{c}{c'}$

Prove: $\triangle ABC \sim \triangle A'B'C'$

Proof	Reason
1. $\frac{a}{a'} = \frac{b}{b'} = \frac{c}{c'} = k$	1.
2. $a = ka', b = kb', c = kc'$	2.
3. $a^2 = b^2 + c^2 - 2bc \cos A$ $(a')^2 = (b')^2 + (c')^2 - 2b'c' \cos A'$	3.
4. $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$ $\cos A' = \frac{(b')^2 + (c')^2 - (a')^2}{2b'c'}$	4.
5. $\cos A = \frac{k^2(b')^2 + k^2(c')^2 - k^2(a')^2}{2kb'kc'}$ $\cos A = \frac{(b')^2 + (c')^2 - (a')^2}{2b'c'}$	5.
6. $\cos A = \cos A'$	6.
7. $\angle A = \angle A'$	7.
8. In like manner it can be shown that $\angle B = \angle B'$	8.
9. $\therefore \triangle ABC \sim \triangle A'B'C'$	9.

Note: As an exercise show the truth of step 8, namely $\angle B = \angle B'$.

a complete proof of one of the Laws of Similarity on the opposite page.

Without going into further detail it should be evident from what has been said that constant endeavor is made throughout this year's work to develop geometric concepts and also to make consistent use of the algebra and trigonometry taught in the ninth grade, with the expectation that by so doing the students will have as much geometric information as heretofore, but considerably more algebraic power as well as a better understanding of the interrelationship of the various branches of mathematics.

In the eleventh grade, the course considers the problem of systematizing the algebraic facts previously learned and the extension of algebra through logarithms, progressions, and the binomial theorem. It has a unique feature in that the applications to a number of topics are given more consideration than the development of further theory that has no immediate application. As an illustration, several cases of oblique triangles in trigonometry are considered; however, the work with such formulas as $\sin 2A = 2 \sin A \cos A$ and $\cos (x + y) = \cos x \cos y - \sin x \sin y$, and the like are omitted entirely. The time thus saved gives more opportunity for applications to such topics as statistics.

Another application that is considered in this course is mechanics. The work in mechanics for the most part concerns itself with concurrent and parallel forces in statics, friction and the inclined plane, and simple machines. All these topics lend themselves readily to simple physical experiments. Thus, by bringing in mechanics, opportunity is afforded to show the application of mathematics to the physical world. Finally, the elementary parts of analytic geometry which are developed might be considered as an application of the geometry studied in the preceding year and the algebra and the trigonometry studied in the current year. Throughout the work, the formula, the equation, and the graph afford excellent opportunity to show functional dependence.

The work of the twelfth year deals with imaginary and complex numbers (fundamental operations, graphical addition and subtraction, polar form), de Moivre's Theorem and its application to the solution of equations of the type $x^n = c$. Linear functions and the elementary analytic geometry of the circle are reconsidered. The work in analytic geometry is extended to include other quadratic functions and loci. The work also includes the solution of higher order equations either by Horner's or by Newton's method, the latter method being dependent on an earlier introduction of the elements of the calculus. Topics from plane and spherical trigonometry are a part of this year's work. Exponential and logarithmic functions, permutations, combinations, and probability are included. A rather unique feature of this work is the use of two series

$$1 + 2 + 3 + 4 + \ldots\ldots + n = \frac{n(n+1)}{2}$$

and

$$1^2 + 2^2 + 3^2 + 4^2 + \ldots\ldots + n^2 = \frac{n(n+1)(2n+1)}{6},$$

which allows us to make clear the following formula:

$$\lim_{\Delta x \to 0} \sum_{x=a}^{x=b} (px^2 + qx + r) \triangle x = \frac{px^3}{3} + \frac{qx^2}{2} + rx \Big|_{x=a}^{x=b}$$

This formula is used for finding areas and volumes, and represents a method which has much to commend it on historical grounds and also in the use it makes of algebra.

If any work preceding this has been done in the calculus, many would prefer to use the notation:

$$\int_{x=a}^{x=b} (px^2 + qx + r)\, dx = \frac{px^3}{3} + \frac{qx^2}{2} + rx \Big|_{x=a}^{x=b}$$

One interesting field that we have to explore is the work in map projection. It is evident that more consideration will have to be given to the part that the knowledge of the sphere plays in the world today. It is assumed that in any study of the sphere some spherical trigonometry is considered.

This article is a plea for looking at mathematics as a whole and teaching the subject not as a series of half-year units of geometry, algebra, etc., but as a collection of mathematical materials in which no artificial line is drawn between the various fields. It is also a plea to apply mathematics to as many situations outside the strictly mathematical field as possible.

The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new so we must think anew and act anew.

—ABRAHAM LINCOLN

The Educational Status of American Adults

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IN the TEACHERS COLLEGE RECORD for March, 1941, the present writer drew attention to the effort of the United States to measure for the first time the educational status of the population and pointed out the value of the data both intrinsically and in relation to other types of census data. The 1940 census recorded for each person 25 years of age and over the number of years of schooling completed. In the Second Series of the Census of Population Bulletins these data are presented in part under the following categories:

No school years completed
Grade school, 1–4 years
Grade school, 5 and 6 years
Grade school, 7 and 8 years
High school, 1–3 years
High school, 4 years
College, 1–3 years
College, 4 years

The median school years completed is also given. This information is published according to sex, by four race groups—native-born white, foreign-born white, Negro, and other races for the urban, rural non-farm and rural farm areas, and for cities of 100,000 and more. The basic data listed above are also given by counties for the urban, rural non-farm and rural farm groups, and for urban places over 2,500 population. Total county figures are also analyzed by sex.

It is from these data that Dean William F. Russell has made his numerous effective presentations of the problem of functional illiteracy.[1] Two and eight-tenths million persons over 24 years of age have never completed a grade of school, and over 7.3 million more of the 74.8 million persons in this age group have had only from one to four years of schooling. At least 13.5 per cent of the population thus fall in the functional illiterate group. The proportion is probably a fraction higher since slightly more than a million persons failed to reply to this question and many of them doubtless fall in the category of functionally illiterate.

The explanation of this disturbing fact lies in part in the low status, educationally speaking, of the Negro. This race supplies 8.7 per cent of the population group under consideration but 26 per cent of the functional illiterates.

[1] See, for example, *Teachers College Record*, Vol. 44, pp. 75-83, November, 1942.

EDUCATIONAL STATUS IN NORTHERN STATES

One of the interesting revelations in these data is the small variation in the median number of years of schooling completed among the Northern and the Pacific Coast states. In the former group the variations between the high and low states is seven-tenths of a year and within some census regions the variation is even smaller as Table 1 shows.

tion, for all has increasingly become a goal toward which the people of the United States are steadily working.

THE CASE OF THE SOUTH

This is true in the South as well despite the consistently lower averages of the states in this region. The trend in this direction is shown in the cities. In the 15 states in the Middle Atlantic and two North Central census divisions, the median years of schooling varies from 8.4 to 10 in the cities. In

TABLE 1

VARIATION IN MEDIAN SCHOOL YEARS COMPLETED BY ADULTS 25 YEARS OF AGE AND OVER BY CENSUS DIVISIONS (1940)

Division	Number of States	MEDIAN YEARS COMPLETED Highest State	Lowest State
New England	6	9.0	8.3
Middle Atlantic	3	8.4	8.2
East North Central	5	8.6	8.3
West North Central	7	8.8	8.3
South Atlantic	8	8.5	6.7
East South Central	4	7.7	7.1
West South Central	4	8.5	6.6*
Mountain	8	10.2†	7.9
Pacific	3	9.9	9.1

* Louisiana—lowest median in the U. S. † Utah—highest median in the U. S.

This slight variation in median years of schooling may appear to some as evidence of the standardization of the public school program. The rise of teachers colleges, the activities of national educational associations and of the conference of chief state school officers probably has had some influence in this direction. More important, however, is the high regard which the people of the entire nation have for education. It is the people who pay the bills and, as will be shown later, high school attendance, if not graduathe 15 states in the southern divisions, excluding Louisiana, the range is from 8.1 to 9.9, and 12 of these states average 8.4 or better. It may surprise some that the median years of school of the urban population in Mississippi and Arkansas, 8.7 and 8.9 years respectively, exceeds the 8.4 average of each of the Middle Atlantic states,[2] despite the

[2] It must be remembered that a few southern states still have only seven years of elementary schooling. The census, however, adopted the procedure of recording the first year of high school as the ninth year of school, believing this made for greater comparability of the medians.

high proportion of Negroes in the southern states.

When only the urban native-born whites are compared, the range in the 15 northern states in the three divisions named is from 8.8 to 11 years and for the southern from 8.5 to 11.7. Seven southern states, when urban native-born white medians are compared, exceed all the states in the Middle Atlantic and West North Central divisions.

THE NEGRO

Implicit in the preceding paragraphs is the retarding effect on medians of the Negro and to a real but lesser extent of the foreign-born white. Nationally the situation can best be stated in tabular form, as presented in Table 2.

TABLE 2

MEDIAN YEARS OF SCHOOL COMPLETED BY NATIVITY GROUP FOR URBAN, RURAL NON-FARM AND RURAL FARM POPULATION 25 YEARS OF AGE AND OVER (1940)

Classification	Urban	Rural Non-Farm	Rural Farm
All classes	8.7	8.4	7.7
Native-born white	9.6	8.6	8.0
Foreign-born white	7.4	7.3	7.2
Negro	6.8	5.0	4.1

As is always the case these national averages for median number of years of schooling completed for those 25 years of age and over conceal diverse and important trends. Thus in all but five of the 32 non-southern states the Negro urban average exceeds that of the foreign-born white. In two of these five the medians are equal. This holds in only three of the 16 southern states.

Figures on the southern Negro make crystal clear the inability and unwillingness of the dominant group in this area to grant the Negro, especially the rural Negro, anything which even approaches equality of educational opportunity.

Comparing the native-born whites with the Negroes, it develops that in the urban population the difference in median years of schooling is three or more years in 12 of the 16 southern states and ranges up to 6.5 years. In the rural non-farm group 11 and in the rural farm group 10 states fall in this group. Only in two states bordering on the north does the difference in any of these categories fall below two years.[3] Facts like these lend point to the insistence of the President's Advisory Committee on Education that any federal aid to education should be proportionately distributed in those states maintaining a dual system of education.

The differential between whites and non-whites is also high for the urban population of the Mountain and Pacific areas, averaging about three years, but the Negro median in these states is slightly above the median in the South for the total population. This difference in the Far West is almost certainly due more to economic factors than to any social barriers to Negro educational progress. In the rest of the urban north the difference

[3] It must be remembered that these data concern only those 25 years of age and over. The improvement in Negro education in the South, especially in some states in recent years, is therefore not registered in these data.

in the educational medians of the whites and Negroes is less than two years in more than half the states and in no case exceeds 2.5 years. When one considers the large amount of migration of Negroes out of the South in the last 20 years these smaller differentials in the North take on added significance. Many northern Negroes received what education they possess in the South before leaving that region. Negroes born in the North have evidently against all obstacles availed themselves of what public education offered.

The same tendencies obtain in comparing the educational status of native whites and Negroes in the rural non-farm and rural farm adult population of the various regions except that the medians are closer together. In one-third of the northern states the difference in the farm population is one year or less and in only one instance exceeds two years. In the rural non-farm group the average difference is also somewhat less than two years and in only one state out of five does it exceed that figure.

RURAL STATUS

Table 2 indicates that on the average the rural non-farm population lags about a third of a year behind the urban and that the rural farm lags just a year. When native whites alone are considered, the differentials are one year and 1.6 years respectively. This is a measure of the handicaps under which rural schools have labored in the past. Again, since the data are concerned only with those adults 25 years of age and over, they fail to indicate whether any recent improvements have been made in rural education.

Again it is the South that accounts for much of the difference. In the 16 southern states the educational status of the native-born white urban population is estimated about 1.5 years[4] above that of the rural non-farm and

[4] Regional medians have not yet been announced by the census.

TABLE 3

HIGHEST AND LOWEST STATE MEDIAN YEARS OF SCHOOL COMPLETED FOR NATIVE WHITES 25 YEARS OLD AND OVER (URBAN AND RURAL BY CENSUS DIVISIONS)

Region	URBAN		RURAL NON-FARM		RURAL FARM	
	High	Low	High	Low	High	Low
New England	10.7	8.8	10.4	8.6	9.8	8.6
Middle Atlantic	9.1	8.8	8.9	8.3	8.4	8.1
East North Central	9.4	8.9	8.8	8.5	8.2	7.9
West North Central	11.0	8.8	8.9	8.3	8.4	7.9
South Atlantic	11.3	8.5	8.9	7.7	8.0	7.2
East South Central	11.7	8.6	9.9	7.8	8.1	7.1
West South Central	10.6	9.1	9.3	8.1	8.0	6.3
Mountain	11.5	9.9	10.5	7.8	9.0	7.2
Pacific	11.4	10.8	9.6	9.1	8.8	8.6

2.5 years above that of the rural farm population. Among the other 32 states there are 10 in which the difference between urban and rural non-farm is half a year or less and 6 more between one-half and one year. Only 7 exceed the approximate average of the South.

The rural farm-urban comparison develops two patterns. In the older areas the difference is one year or less in 10 of the 14 states. In the farther west all but one of the 18 states show a difference of more than a year and the average is approximately one and three-fourths years.[4] The farther west and the more recent the time of settlement, the greater the difference between urban and rural in the number of grades completed by the native white adults. Table 3 (on the preceding page) summarizes these data.

RECENT PROGRESS IN EDUCATION

The United States is better educated. Several times in this discussion attention has been called to the fact that data under consideration do not tell the story of recent progress in education. One measure of that improvement is the median school years completed by age groups. These data will not be fully available until the Fourth Series of Population Bulletins is issued. These are far behind schedule because of war demands on the Government Printing Office. The Census Bureau, however, has released a tabulation on this point for the white population based on a 5 per cent sample. It holds much of encouragement for educators as is apparent from data in Table 4.

TABLE 4

MEDIAN SCHOOL YEARS COMPLETED BY AGE GROUPS FOR WHITE POPULATION (1940)

Age Group	Median School Years Completed
25 to 34 years	10.5
35 to 44 years	8.7
45 to 54 years	8.2
55 to 64 years	7.9
65 years and over	7.6

This Fourth Series Population Bulletins will also give for each city of 50,000 or more and for the remainder of each state by urban, rural non-farm and rural farm areas, the number of school years completed by single years from none to 16, or to the completion of college and for 17 or more, or post-graduate work.

Data will also be presented by sex and age by school attendance for single years for persons 5 to 24 years of age inclusive and comparably in five-year groupings to 74 years for the adult group.

Among the half dozen other tabulations under way or under consideration two will be of special interest. The first of these will give the last year of school completed in seven groupings by residence in 1935 for persons 25 to 34 years of age. This study of the relation of education to migration will supplant fact for conjecture with respect to the qualitative aspects of rural-urban movement and also the south-north trend, so far as measurable by educational status. It will probably make clearer than ever

[4] Regional Medians not yet announced.

the degree to which education is in reality a national concern. The second of these will relate fertility to last year of school completed.

Although some of the tabulations planned will be on a sampling basis, the completion of the 1940 census tabulations on education will give to those interested extremely useful information never before available and will also present a view of the education of the people of the United States such as could not have been obtained in any other way.

Someone has termed the present world conflict a "Smart Man's War." Probably no other name could state so briefly and yet so effectively the conditions that must be met if the United Nations are to win the war—provided, of course, that one has an adequate connotation for the adjective, "smart." It is clear now that the winning of the war will depend more upon a high level of informed intelligence and a high level of developed skills than it will depend upon any other single factor or combination of factors. Since the informing of intelligence and the development of skills are primary functions of education, one may conclude that, in the last analysis, if the war is to be won education must win it.—William C. Bagley in WHAT EDUCATION IS LEARNING FROM THE WAR, *Educational Forum*, November, 1942

Graduates of Lincoln School

GERTRUDE HILDRETH

PSYCHOLOGIST, LINCOLN BUILDING
HORACE MANN-LINCOLN SCHOOL, TEACHERS COLLEGE

How do the graduates of Lincoln School fare in college? How do they measure up to the standards of the workaday world? are questions invariably raised when the program of Lincoln School is under discussion. Abraham Flexner, whose book *A Modern School* led to the founding of Lincoln School, said, in referring to the new school, "However plausible the arguments in its favor, final judgment cannot be favorable unless the students it turns out are keener, abler, better organized, more resourceful, and more highly cultivated than the products we have ventured to criticize."

Ever since the first graduates completed their work at Lincoln School in 1921, evidence has been accumulating to support the faith of the founders in the new-type program for youth, for the graduates have tended to display the qualities which were mentioned by Dr. Flexner, to have been well prepared for college, and to be equipped for assuming the responsibilities of adult life.

QUESTIONNAIRE STUDY OF THE GRADUATES

By 1938, more than six hundred boys and girls had graduated from Lincoln School.[1] At that time a questionnaire prepared by the writer relating to personal data, school experiences subsequent to graduation, occupational record, present economic status, and the graduate's evaluation of the advantages and limitations in his Lincoln School experiences was sent to every living graduate, 606 in all. Two hundred fifty-six returns were received, 121 from men, 135 from women, representing 42 per cent of the alumni.

Several tests prove that the replies received came from a representative cross section of the alumni group. The sex ratio of replies tallied with the ratio among all graduates. The distribution of returned questionnaires by years was proportional to the number of graduates in each year. Additional checks proved that the replies came from a cross section of the group in mental ability as rated by tests, in geographic distribution, and in economic status.

There was a marked increase in the number of graduates from the year 1928 onward. At graduation the typical graduate was between seventeen

[1] The general character of the student population of Lincoln School is described in a number of the references listed in footnote 3, page 365.

and eighteen years of age. Three-fourths of the students entered Lincoln School from other schools where progressive practices prevailed. The graduates had attended Lincoln School on an average of six years. Rated by the individual Stanford Binet intelligence tests given to each student shortly after his admission to the school, the median I.Q. was 122 with a range from 85 to 166. At the time they filled in their questionnaires, the large majority of the respondents (207) were residing on the eastern seaboard.

The following sections summarize the facts revealed in the questionnaire, supplemented at certain points by data from office records on file at the school.

COLLEGE EXPERIENCES AND GRADES

College Attendance. Data from the questionnaire replies and school records indicate a general tendency for Lincoln School graduates to continue their education in college. Those who did not attend degree-granting colleges went on to junior colleges or continued with specialized training in the arts, music, secretarial work, social service, and other professional fields.

Of the 256 graduates who responded to the questions relating to college, 81.5 per cent of the girls and 99.2 per cent of boys attended institutions of collegiate rank following their graduation from Lincoln School. Forty-four per cent of the girls and 67 per cent of the boys received degrees from four-year institutions. Many of those who had graduated in 1935 or later were still in college at the time they replied. One hundred ten different institutions had been attended by the girls, 120 by the boys.

In order of frequency of mention, the preferred majors were: history, economics, political science, 63; English, 46; languages, 31; fine arts, 23; business, 20; medicine and pre-medical, 16; psychology and psychiatry, 15; music, 15; sociology and social work, 15; engineering, 15; mathematics, 14; dramatics, 12; education, 11; general courses, liberal arts, 11. There was considerable difference between the majors of the men and women students.

Campus Activities. Nearly all the graduates who attended degree-granting institutions were active in campus affairs and participated in many different extracurricular activities. Among the responses to the questionnaire were included 473 different notations of campus activities, with a percentage distribution as follows: sports, 29.8 per cent; club membership, club officers, 17 per cent; student and campus government affairs, 15 per cent; editorial work and literary work, 12 per cent; musical activities, glee club, orchestra, choral societies, 10 per cent; social service, participation in religious organizations, 3.8 per cent; debating, oratory, 1.48 per cent.

College Marks. The marks earned by students in college, reported directly by the colleges to the school, were difficult to evaluate because the marking systems varied from institution to institution, and marking was

more severe in the more highly selective schools. In general the marks tended to "creep up" the longer the student remained in college.

Comparison Study of Lincoln School Graduates by the Aiken Committee. A comparison study of conventional and experimental school graduates in college was begun in 1936 by Mr. and Mrs. Dean Chamberlin of the Aiken Committee of the Progressive Education Association. Their report of graduates of all the thirty schools represented in the study has recently been published.[2] Preliminary reports were sent to the separate schools early in the study. Lincoln School graduates for the years 1936, 1937, and 1938 were matched for age, sex, and ability with control cases from conventional schools in the same colleges and at the same grade level as the Lincoln graduates. Their progress in terms of marks earned, honors won, extracurricular participation, personal and character traits was followed throughout each selected student's college career. The Lincoln School group studied in this way was small in comparison with the total Lincoln graduate group. For comparative purposes all marks were converted into grade point averages. The results show that for the 73 pairs matched, first-year, second-year, and third-year students, there were slight fluctuations from group to group, the controls now above the Lincoln group, now below; but, statistically, there was no real difference between the average marks of the Lincoln School graduates and "matchees" from conventional schools.

Binet I.Q. and College Marks. Results from the questionnaire were tabulated as below, showing the relationship between the early Stanford Binet Test ratings at Lincoln School and average marks earned in college.

BINET I.Q. AND COLLEGE MARKS

Average mark earned in college	A	A−	B+	B	B−	C+	C	C−	D
Median Stanford Binet I.Q.	147.5	137.5	134	127	126.7	126	121	122.5	102.5
Number of cases	5	14	18	29	22	11	9	7	1

EXPERIENCES SINCE GRADUATION

Lincoln School graduates subsequent to graduation can scarcely be considered "hearth-bound." They tend to travel widely, to engage in a variety of professional and recreational activities, and to enjoy hobbies in their leisure hours. In the questionnaire responses there were 186 mentions of these activities, divided as follows: travel abroad, 26.95 per cent; travel in this country, 15.6; writing, publications, 11.7; study, research, scientific and experimental work apart from college or profession, 6.25; art and music, 4.29; dramatics, 3.15; philanthropic and social service work on a volunteer basis, 2.34; sports, 1.56; amateur construction work, radio, .78 per cent.

Occupational Status. The average length of time the graduates had been out of Lincoln School when the ques-

[2] Chamberlin, Dean, Chamberlin, Enid S., and Drought, Neal. *Did They Succeed in College?* Harper & Brothers, New York, 1942.

tionnaire study was made was seven years. Considering the fact that the majority continue their education after graduation, and many tend to pursue graduate work in the universities, it is evident that the typical graduate could not by 1938 have attained the highest job level he would subsequently reach. As is to be expected, the data show the normal tendency for the older graduates to be in the more responsible positions, to have higher occupational rank, and to receive the higher salaries.

Someone recently commented that more gifted persons should go into the teaching profession. Teaching proved to be the favorite occupation of the Lincoln School graduates who replied to the question as to occupation. The tabulation for the occupations of the men replying is as follows: teacher, 13; sales manager or salesman, 5; business executive, 7; doctor, 6; finance and banking, 6; lawyer, 5; author, writer, editorial work, 5; engineering, 5; accountant or auditor, 3; research, chemical, industrial, etc., 3; office work, 3. The following occupations were each listed once or twice: merchandizing, manufacturing, architect, theater, insurance, army officer, radio, sculpture, advertising, agriculture. For the women the tabulation is as follows: teacher, 21; secretary or office executive, 15; housewife, 15; social work, psychological service, 11; commercial art, 8; business, merchandising, 5; writing, editorial work, 3; librarian, 2; statistician and medical research, one each. Business opportunities in New York City apparently influenced the women more than the men, for many women indicate that they have held local positions temporarily as salesgirl, model, or secretary.

The general conclusion may be drawn from the questionnaire responses that the typical Lincoln School graduate gives a good account of himself after graduation, both in his further education and in his lifework. The replies showed that the group had developed a measure of spontaneity, originality, purpose, and integrity that must be due to some extent to their Lincoln School training.

STUDENTS' EVALUATION OF THEIR SCHOOL EXPERIENCES

The last item in the questionnaire asked the student to appraise his experience at the school, describing any special advantages or limitations in the school's program of which he was aware. Two hundred twenty-seven of the students who replied, 106 men and 121 women, made some statement in response to the questions; 29 or 11.7 per cent made no comment.

Responses varied widely, depending upon the individual's sex, his personal characteristics, the length of time since his graduation, his activities and experiences since graduation. The frankness and notable sincerity which characterized the replies may be attributed in part to the training the Lincoln student receives in expressing his ideas freely and with conviction. The statements reflected the personal idiosyncrasies of the respondents, a fact which made the material somewhat difficult to classify.

The replies to the question, "Of what value and limitations in your training at Lincoln are you aware?" have validity only with reference to the type of program carried on at Lincoln. This program has been fully described in several publications.[3] It is experimental in character, affording students more time and opportunity than in conventional schools for activities allied to genuine problem-solving related to the student's concerns and interests. Subject matter in some areas is organized in integrated, core courses. The content is not haphazardly chosen, but is selected with reference to pupil needs and abilities, social and cultural values. The curriculum is designed to give the students integrated and increasingly self-directed experiences.

Some of the graduates' statements which varied in length from a sentence to several typed pages, were wholly favorable in attitude toward the school's program, others were largely unfavorable, while most of the statements pointed out both good and objectionable features of the school program from the student's point of view. In the final analysis, the responses were more largely favorable than unfavorable, though many limitations in the student's school experiences were pointed out.

The very points that were mentioned as favorable factors by one student were considered limitations by another—proof that it is not alone the school program, but the student's own personal traits and attitudes that contribute to success or failure at school.

Favorable and Critical Comments. The favorable responses of the men with regard to various aspects of school life were classified as follows: general statements, such as "I consider the school ideal," or "It was a privilege to have attended Lincoln," 27 statements; cultural values, intellectual stimulation, 39 statements; freedom, independence, opportunity for initiative, self-responsibility developed, 28 statements; superior teaching staff, 18 statements; opportunity for social living, 14 statements; good preparation for college, 12 statements; inculcation of good study habits, 3 statements; good resources for study, 1 statement; advantages discerned in specific subjects taught, 30 statements. In this last category practically every field or subject in the curriculum was mentioned.

The critical responses of the men were classified as: general statements reflecting unfavorable attitudes, "I didn't benefit much from this 'modern training'," "I doubt whether experiment and novelty are foundations of a

[3] Lincoln School Staff. *Curriculum Making in an Experimental School.* Ginn and Company, Boston, Mass., 1927.

Dix, Lester and the High School Staff. "The Experimental High School Program." *Teachers College Record,* Vol. 38, pp. 503-517, March, 1937.

Lincoln School Staff. "Integrated Education in Lincoln School." *Teachers College Record,* Vol. 37, February, 1936 (Whole issue).

Lincoln Elementary School Staff. *A School for the World of Tomorrow.* Bureau of Publications, Teachers College, Columbia University, New York, 1940.

Lincoln School Staff, High School Division. *Democracy's High School.* Bureau of Publications, Teachers College, Columbia University, New York, 1941.

Stolper, B. J. R. and Fenn, Henry C. *Integration at Work.* Bureau of Publications, Teachers College, Columbia University, New York, 1939.

sound education," "The school did little for me," 13 statements; tendency toward haphazard work and thinking habits, 17 statements; personal and social disadvantages, 5 statements; too much freedom, need of more discipline, 29 statements; trouble in college, 31 statements; lack of specific knowledge, 14 statements; poor study habits, 7 statements; difficulty later with examinations, 8 statements; trouble with the skills or tool subjects, 26 statements; difficulty in specific subjects or areas of study, 27 statements.

The responses of the women were classified in similar categories: general, such as "I'm convinced that progressive education accomplishes most for the student," "I'm proud to have attended the school and like the system," 46 statements; social contacts and broad social point of view, 23 statements; stimulation to thinking, broad cultural outlook, 37 statements; freedom, independence, a creative environment in which to work, 34 statements; self-confidence developed, 5 statements; good work and study habits developed, 10 statements; satisfactory college preparation, 24 statements; outstanding faculty, 25 statements; superior work in specific subjects or curriculum areas, 18 statements; vocational training, 3 statements.

Critical comments of the women were as follows: general, such as "Need a better balance between 'progressive' and 'conventional' education," 3 statements; lax discipline, haphazard methods, 16 statements; superficial knowledge, poor balance in the program, 16 statements; lack of exact knowledge, 15 statements; poor preparation for college, 33 statements; study habits not well developed, 11 statements; lacks from a personal and social standpoint, 2 statements; difficulty with the faculty, 2 statements; limitations in specific subjects or curriculum areas, 16 statements; lack of Latin, 5 statements; lacks in specific skills, 7 statements; dissatisfaction with members of the student body, 4 statements; other lacks or deficiencies and miscellaneous limitations, 13 statements.

Considering all responses together, for both men and women, 747 in all, the favorable responses constituted 54 per cent of the total, the critical comments, 46 per cent.

An analysis of the responses in relation to the personnel making the comments reveals some interesting facts. More men than women made unfavorable comments, as they considered their Lincoln School experiences in retrospect. This sex difference is no doubt attributable to the fact that the men met more strenuous competition after graduation than the women. More of them went to college, and many of them sought admission to the more highly selective institutions. The average Stanford Binet I.Q. of those making favorable responses was 127.5, unfavorable, 121.7. Those who were older at graduation made more favorable comments than the younger graduates. Those who went into technical fields after graduation tended to make more unfavorable comments than those who entered the literary and artistic fields. Those making favorable comments tended to have had more suc-

cessful careers in their chosen professions.

Summary of Reactions. The favorable comments related primarily to the stimulating atmosphere in the school, opportunity for freedom, for independence, for self-expression; and individual features of the school that had particular advantages for certain students. The responses indicate that, on the whole, these students were happy in Lincoln School, they appreciated the freer atmosphere, the opportunity to experiment, to develop their ideas, and to have "the whole world opened up" to them. They enjoyed their inspiring associations with gifted teachers, whom they credit with liberal views, sympathetic understanding, and a deep personal interest in the students, ability to teach and mastery of their subject fields. They referred also to the superior facilities and equipment, the opportunities for free discussion about vital matters, and for enriching aesthetic experiences. They admired in their fellow students sincerity and sense of responsibility. The social and personal advantages in the school were considered superior by many of the students. A number found Lincoln School experiences particularly helpful after the first year in college.

In contrast to these advantages, some of the students felt that they needed more discipline, that the freedom allowed them worked a hardship with individuals who had not learned self-mastery. Some regretted their failure to acquire better technique and study habits, and considered having "the whole world opened up to them" a disadvantage rather than an asset. Certain students would have appreciated more attention to skills and more learning of facts. Some were quite overwhelmed in attempting to adjust to conventional college demands, and others felt that they had not been sufficiently prepared through their school experiences to meet the stern realities of life.

The difficulties experienced in adjusting to college were chiefly in connection with studying, preparing for long examinations for which "cramming" was necessary, complaint by college teachers that the students did not know grammar or correct form in writing, that they lacked specific factual information.

Many of the Lincoln School graduates who felt they were ill prepared for college stressed the point that this usually reflected more on the limitations of the colleges than of the school. They found their freshman work particularly narrow, lifeless, formal, regimented in contrast to the vital experiences they had had at Lincoln. The first year at college seemed a definite setback to many Lincoln School graduates. After that, they testified that their liberal school training at Lincoln was a decided asset in pursuing college studies. One student reported, "Now in college I feel stagnation all about me"; another, "I felt cramped in an academic college."

The fact that transition from high school to college creates many problems that are common among students generally, regardless of whether the high school from which the student

comes is conservative or progressive, is indicated in a recent research bulletin of the National Education Association.[4] The Lincoln School graduates themselves frequently commented that similar difficulties were experienced by their classmates from other schools, even those from conventional "prep" schools.

Although students admitted that the Lincoln School had not trained them directly for cramming for examinations, they admitted that such training would actually have wasted their time. They were obviously in agreement with Stephen Leacock who commented, "I would make the school and college program consist of a maximum of stimulation and a minimum of examinations."

There was a quite general complaint among the graduates that grammar was not taught or learned. "I wouldn't know a gerund from a syntax," commented one graduate. The lack was felt chiefly in connection with formal college work in English and foreign language study, in contrast to others about them who had studied formal grammar in "prep" schools. Although students stated that they felt a lack of training in formal grammar, the rhetoric in their written statements in the questionnaires showed that functionally, at least, they had English grammar well in hand.

[4] *From High School to College.* Research Bulletin of the National Education Association, 16, No. 2, March, 1938.

THE NEED FOR COMPARISON STUDIES

After the questionnaires had been sent out an effort was made to enlist the cooperation of private schools enrolling a population similar to Lincoln in mental calibre, economic and social background, but following the more traditional school program. Although several "matchee" schools were located, none had the time to give to a questionnaire study of this kind. It seems imperative for the more adequate appraisal of experimental school programs that secondary schools more generally make follow-up and comparison studies of their graduates, using questionnaire techniques and other evaluation devices similar to those which were employed by the Aiken Committee.

This article represents a brief summary of the comprehensive study of the Lincoln School graduates. Of necessity, many of the phases of the study are touched on lightly or omitted altogether. The complete detailed report of the investigation is on file in manuscript form at Lincoln School, Teachers College, Columbia University.

If a man believes in and fights for freedom for all, he is the ally. If he is fighting for the freedom of a group, be that group national or racial or political, then he is the enemy.—Pearl Buck in AMERICAN UNITY AND ASIA

Sarah Sturtevant, 1881 to 1942

THE news of Professor Sarah Sturtevant's death on December 18 brought to all her friends a feeling of mingled relief and sadness—relief because her long, heroic struggle against pain and bodily impairment was ended, and sadness because her shining spirit and physical presence have been withdrawn. However, to the extent to which a vital personality continues through the lives it touches, she may still be considered an active influence among us.

The extent of Professor Sturtevant's influence upon others can never be completely known, but throughout the thirty-eight years of her professional life there was continual evidence of the affectionate regard of students and friends, testimony that her interest in them as persons, her sympathy and encouragement in time of difficulty, and her fine, steadfast vision of the possibilities in counseling and group work with young people, have been precious experiences in their lives. Something in her teaching and her professional relationships touched off sparks of enthusiastic conviction in other minds similar to that in her own. Her quick wit, her ability to drive home a point with apt and practical illustrations, and her concern for fundamental issues made her a forceful speaker and writer—one to be reckoned with in all her fields of interest. The greatest values life held for her were her associations with people; abstract thought, though important, came second. Recently she wrote, "There has run through all the experience of my life the red thread of opportunity to know and to care for people, and to be interested in their conduct as units in a social world." Human values, for her, were paramount.

Sarah Sturtevant was born in the "Bret Harte country" in California, the daughter of a Baptist minister, and the eldest of five children. When she was eleven her mother died. From then on she was mother for the four younger children and home-maker for the family. She was educated in the schools and the State University of California, taking her bachelor's degree at Berkeley in 1904. Her professional life falls into two periods of almost equal length, the first nineteen years being spent in California, and the second nineteen at Teachers College. For some time after her graduation from college she taught English in various secondary schools. Then in 1918 she was appointed dean of girls in Fremont High School in Oakland. This new work interested her greatly, and the next year she came to Teachers College for graduate study under Dr. Romiett Stevens, who was, for the sixth year, giving a course for "Advisers of Women and Girls." Upon her

return to California Professor Sturtevant became dean of girls at the University High School in Oakland, and before long she was teaching a course for deans and advisers of girls at the University of California, in addition to her work in Oakland. It was during this period that she called together for conferences her fellow deans and their student leaders in high schools of the San Francisco Bay region. She was also influential in helping groups in other parts of the state to organize similar associations.

In the twenty years that have passed since these beginnings, Professor Sturtevant had the satisfaction of seeing these early informal groups develop into strong organizations, and also of keeping her own place in them over the years as counselor and friend, even though she was serving in another state across the continent. It is characteristic of her that though the latter and probably more important half of her professional life was spent in New York, she always retained her intense interest in educational developments in California, and through her wide acquaintance with deans in California (many of whom had been her students) she continued to serve *in absentia* the state she loved so well.

When the invitation came in 1923 to join the faculty of Teachers College and to carry on the work begun by Dr. Stevens, Professor Sturtevant entered upon a much wider field of interest and activity. The history and nature of deans' work had not yet been studied and was little understood. There was great need for information about this rapidly developing area of administration. Study of methods employed by successful deans and knowledge of techniques that might be useful in such work were urgently needed. Newly appointed deans all over the country were clamoring for help with the multitude of problems they were called upon to solve. The complete absence of agreement concerning what constituted the work of a dean of students led to confusion and often to disappointment on the part of all concerned. Professor Sturtevant entered with her usual energy upon the threefold task of teaching her rapidly growing classes, initiating and encouraging surveys and studies of the work of deans, and promoting and standardizing the whole professional field by means of active participation in the National Association of Deans of Women and allied professional organizations. Since her work over the years continued to fall into these three divisions, it may well be considered under these heads.

The effects of her teaching, as has been said, can never be fully known, but they constitute an important contribution to secondary and college education in foreign countries as well as in America. During her nineteen years at Teachers College almost five thousand women and men studied in her department. In her classes she always kept close to the realities of school and college life, and insisted upon the search for solutions of actual problems in the light of the best available educational theory and of social conscience. Her constant concern for

practical application of theory, her own wisdom born of experience, and her vibrant personal leadership made her classes invariably interesting and stimulating. Her sincere desire to know her students personally and to help them professionally turned students into friends and greatly enriched the relationship between them. Former students, many now in posts of leadership, always felt free to call upon her for advice and help long after the official ties were broken, confident that she would gladly respond with the best she could offer. The huge amount of correspondence she carried on with former students was no burden, but rather one of her greatest joys. It can be truly said that Sarah Sturtevant was a great teacher.

Her contributions in print were by no means inconsiderable. In an important way they stimulated thought, clarified issues, and presented information regarding the field of student personnel work. Her first endeavor at Teachers College was to initiate and take part in the making of surveys of the position of dean in high schools, teacher-training institutions, and colleges. Later she shared in editing a collection of articles by various deans in which they described methods used in their work. A number of papers appearing from time to time in various educational magazines and bulletins complete the record, except for a booklet which, at the time of her death, was being prepared for publication in collaboration with Dean Ethel Rosenberry. This booklet deals with the work of girls' leagues in high school. It seems fitting that Professor Sturtevant's professional career should end as it began, with practical plans for the enrichment of the life of high school girls and with plans for programs of "learning through doing" that would prepare young people for democratic living. A list of Professor Sturtevant's more significant publications will be found in the bibliography on pages 372-73.

Not only did she contribute valuably through research to a clarification and strengthening of personnel work, she also, through her influence in the founding and building of the California Association of Deans and the New York State Association of Deans,* through her chairmanship of the American Council of Guidance and Personnel Associations, and through her vigorous leadership in the National Association of Deans of Women, helped create monuments to ideas which she considered important. The honorary degree of Doctor of Pedagogy conferred upon her by Russell Sage College in 1939 constituted further recognition of her leadership qualities.

With Professor Sturtevant's permission and whole-hearted interest, plans began to take shape several months ago to establish a Sarah M. Sturtevant Fellowship Fund. It is proposed that the income from this fund, when raised, shall be awarded annually to some woman graduate student who fittingly embodies in her qualities and plans the ideals for which

*She was the first president of the New York State Association of Deans, serving for six years.

Professor Sturtevant stood. As the plans for raising this fund have gone forward, the committee has received many letters from former students whose testimony seems to amount to this: they derived from their study with Professor Sturtevant a "solid knowledge of content, of what the field was all about"; they learned something about "how to teach by having demonstration after demonstration of how it is done by an artist-teacher"; "an appreciation and some skill not only in the field of individual counseling, but also in how to work with young people in groups"; and a sort of "polarization" of their own "feelings toward people and new insights regarding human nature and how it works that have contributed valuably to better guidance work and a wiser administration."

The last letter received at Teachers College, written in Professor Sturtevant's own hand, was a long one. It was full of a vivid appreciation of the many beautiful things around her in her hospital room; it inquired with interest regarding many people of whom she was not hearing often enough or in sufficient detail to satisfy her; it mentioned casually that it took all of her time over a five-day period to write such a letter because the conditions under which she must write were difficult; it spoke of the fact that in some ways she seemed better physically; and it ended with this sentence: "Some people prolong their good nights until morning. Perhaps I am one of these."

HARRIET HAYES
ESTHER LLOYD-JONES
RUTH M. STRANG

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Recent Doctoral Studies

PRINCIPLES OF DEMOCRATIC SUPERVISION*

It may be assumed that for some time to come the people of the United States will favor a democratic way of life. This being true, the public school is called upon to prepare pupils to participate in democratic living. Children's most impressionable years in school should be characterized by constant growth in cooperation, self-direction, and social responsibility. Unless teachers, supervisors, and administrators maintain democratic relationships in the performance of their functions, pupils will not go to school under democratic influences. Therefore, it is extremely important that supervision, along with other school services, operate in a democratic manner.

Supervision has become a practical art during the growth and expansion of the public school, and it has developed empirical principles which have been influenced by the many philosophies of education that have been dominant during its growth. Some of these philosophies have been democratic while others have exhibited autocratic or mechanistic tendencies. Consequently, the principles of supervision currently accepted reflect those varied philosophies.

For the purposes of this study, the principles of supervision found in educational literature were classified under four heads: (1) those concerned with the nature of supervision, (2) those concerned with the purposes of supervision, (3) those concerned with the organization of supervision, and (4) those concerned with supervisory technique.

In democratic education, administration and supervision are coordinate, correlative, and complementary functions having as their common purpose the provision of all means and conditions favorable to teaching and learning. Thus, there is no sharp distinction between the two. Administration is a cooperating agency which responds to the teaching-learning situation rather than dictating what the situation shall be. Supervision has many of the characteristics of creative teaching. It is not scientific although it utilizes science. It is rather a practical art based upon a philosophy of human values and in process of developing a professional status.

Supervision, as well as teaching, has as its ultimate purpose the promotion of pupil growth. It attempts to help teachers create an environment favorable to teaching and learning, to promote teacher growth, to improve teaching and learning, to coordinate and integrate educational effort, and to carry out educational policy cooperatively arrived at. Good morale is a by-product of democratic supervision, a means of evaluating its effectiveness rather than an objective to be aimed at directly.

The organization demanded by democratic supervision is no inflexible hierarchical system of relationships between superior and inferior officers. It is true that responsibility for exercising educational leadership falls heavily upon the superintendent of schools. But this leadership is not exercised through imposing directions upon subordi-

* By John Alexander Rorer, Ph. D. Teachers College, Columbia University, Contributions to Education, No. 858.

nates. It is exercised through seeking and gaining the full cooperation and participation of the entire staff and community in formulating, effecting, and evaluating educational policy. Thus, leadership is a shared responsibility of all staff members.

Democratic organization must be able to adapt itself to the needs of each supervisory-teaching-learning situation. It operates not so much "from the top down" as "from the bottom up." That is, its operation is determined by the needs of the learning situation rather than by administrative convenience.

The work of the supervisor himself should be organized neither by subjects nor by grades, but by large centers of interest designed to integrate learning and provide for continuous pupil progress.

Supervisory technique presents three phases—planning, executing, and evaluating. These are not separate or sequential performances but are continuous and simultaneous. They are characterized by wide participation of supervisors, administrators, teachers, pupils, and members of the community at all stages and to the greatest extent feasible.

The concept of supervision arrived at in this study is one of widespread cooperation and participation by all members of the teaching and administrative staff as well as by members of the community. It implies that democratic supervision operates in such a manner as to exemplify the democratic relationships which the schools aim to develop in children.

THE READING INTERESTS AND NEEDS OF NEGRO COLLEGE FRESHMEN REGARDING SOCIAL SCIENCE MATERIALS*

THIS investigation was undertaken as the initial step in a series of researches planned to determine the reading interests, needs, and abilities of Negro college students as the basis for a book collection designed to promote wide general and cultural reading and to render guidance in situations in which the student has some opportunity to choose what he reads. It sought to answer the question: In view of their interests and needs, what materials related to the social sciences should be made available for the reading of Negro college freshmen?

METHODS, AND SOURCES OF DATA

A check list was devised especially for this study. It was prepared in two forms and consisted of one hundred annotations of books relating to the social sciences and representing a cross section of recent listings in the *Cumulative Book Index* and the *Book Review Digest*. One form was for determining student interest and was administered to freshmen entering Howard University in the fall of 1939 and 1940. There were 489 usable student returns. The other form was for ascertaining jury recommendations concerning need, and was filled out by 61 teachers, librarians, and writers in the social sciences. These individuals were of both races, located in all parts of the country, employed at segregated and mixed institutions, and represented a variety of interests, contacts, and points of view in the field.

FINDINGS

Concerning the group as a whole, it was found that: (1) Negro students preferred above all to read books relating to the Negro; (2) the students gave higher preference to matters which showed immediate or specific application to their existing status than to topics which were of broad or gen-

*By WALTER G. DANIEL, Ph.D. Teachers College, Columbia University, Contributions to Education, No. 862.

eral significance; (3) the sociological topics held higher potential interest than did economic or political ones; and (4) the interest in social science fiction was not marked. Various population groups were studied. Groups showed special interest in books where the annotation suggested treatment of characters like themselves or the careers to which they aspired. Differences were revealed in reading preferences among the several groups of freshmen indicating majors in social sciences, natural sciences, and languages; however, the greatest differences were found between the sexes.

The members of the jury showed a tendency to rate topics higher than did the students. The difference in means (.396) is statistically significant. The coefficient of correlation (.45) indicated some degree of association between jury recommendation and student preference. The jury laid stress on books about social, economic, and political institutions, the causes of problems and the effects, whereas the students observed tended to confine their interests to the present status of problems closest to them, often with intense personal concern and with little attention to the broad, related aspects of their interests.

USES OF THE STUDY

In addition to the generalizations developed, tables were devised that showed by index figures and graphic representation the general level of interest and the need for each topic of subject matter studied. These tables may be consulted in appraising the resources of a book for satisfying reading interests and needs in the social sciences. They are useful as a subject check list but not as an author and title one. Suggestions may be derived for book purchases, book exhibits, subject bibliographies, reading guides, book discussion groups, and for making recommendations to groups of students upon the basis of their indicated choices in such matters as occupations and academic majors.

OBJECTIVE MEASUREMENT OF INSTRUMENTAL PERFORMANCE*

MEASUREMENT of achievement on musical instruments has not received much attention in the past. A review of significant studies in the field of music led the author to conclude that: (1) More work has been done in devising musical aptitude tests than in developing achievement tests. (2) Individual performance tests alone have exhibited reliabilities high enough to differentiate individuals. The group paper and pencil tests have been found to be more highly correlated with general mental ability than with any of the present-day music ability tests. (3) Most of the individual performance tests have been designed to measure sight singing. (4) Only one test of instrumental performance has been constructed and validated by modern psychometric methods. (5) There exists today a great need for objective measures of instrumental achievement.

Two specific objectives were established: to determine whether an objective, reliable, and valid test of performance on some musical instrument could be constructed; and, with such a test established, to measure individual achievement in a group of students who had studied for different periods of time on the instrument and secure a first approximation to the developmental curves.

PROCEDURE

An analysis was made of the twenty-three most widely used methods of cornet in-

*By JOHN GOODRICH WATKINS, PH.D. Teachers College, Columbia University, Contributions to Education, No. 860.

struction as judged by a group of competent instrumental teachers. The average week in which each musical symbol is introduced was determined. A number of melodic exercises of increasing difficulty were composed, and in them were introduced the various musical symbols in the order established by the analysis of methods. Four roughly equivalent forms were thus set up.

These preliminary forms were administered to a group of cornet players, and the difficulty of playing each exercise with any given number of errors was computed. The measure was defined as the scoring unit, being either right or wrong. Errors were carefully defined to insure a high degree of objectivity. Out of these exercises were built two final forms of the test which were equivalent in difficulty and reliability throughout their entire range. The correlation between these two forms was .982. Ten rank-order validity coefficients between test scores and teachers' estimates of ability varied from .66 to .91, all except two being above .80.

Two scores were secured from the test. The Sight Performance or S score was determined by administering the test to the student at sight. The Practiced Performance or P score represented his achievement on the same test after a week's practice on it. These two scores approximate what the musician means when he refers to *sight reading ability* and *technical skill*.

Form A of the test was administered by a number of competent music instructors to 153 students—first at sight and then after practice. These S and P scores were plotted against the period of time the student had spent in study on his instrument, and growth or developmental curves were fitted to the data.

FINDINGS

This study demonstrates that objective measurement of musical performance on an instrument is possible.

The objective tests developed were found to differentiate achievement reliably and validly in two areas of performance, namely, sight reading ability and technical skill.

The study establishes first approximations to growth curves showing the development of sight reading ability and technical skill. These curves indicate that, in the early periods of learning, sight reading ability (Sight Performance) is almost equal to technical skill (Practiced Performance).

With increasing periods of study up to two years the difference between Sight and Practiced Performance becomes greater.

There is evidence of negative acceleration in the growth curves.

The rate of progress in Practiced Performance during the first two years was much greater than it was in Sight Performance. After two years of study the rate of progress appears to be about the same in both abilities.

The methods used in treating the problem of difficulty in music should prove of value to other investigators in the field.

Departmental Notes

Gonzalez Lodge

Dr. Gonzalez Lodge, Professor Emeritus of Latin and Greek, died on December 23, 1942, at his home in New Canaan, Conn. He was born in 1863 in Fort Littleton, Pa. He received an A.B. degree in 1883 and a Ph.D. in 1886 from Johns Hopkins University, an LL.D. from Franklin and Marshall College in 1901, and a Litt.D. from Columbia University in 1929. He was professor of Greek at Davidson College from 1886 to 1888 and professor of Latin at Bryn Mawr from 1889 to 1900. From 1900 until 1930, when he retired from active service, he was professor of Latin and Greek at Teachers College. He was a distinguished scholar and an extraordinarily gifted teacher. His *Lexicon Plautinum* is considered one of the greatest works of its kind in America. Dr. Lodge was editor-in-chief of *The Classical Weekly* during its first six years, until 1913. He was a member of the American Philological Association, the Archaeological Institute of America, the British Classical Association, Phi Beta Kappa, and the Century Club.

M. Alice Asserson

Dr. M. Alice Asserson, Assistant University Physician at Teachers College, died on January 16, 1943, at Roosevelt Hospital in New York City after a long illness. She was born in Catonsville, Md., in 1871, the daughter of Mary A. and Rear Admiral Peter C. Asserson of the U. S. Navy. In 1901 she received an M.D. degree from Cornell University Medical College. She then served as interne at the New York Infirmary for Women and Children for two years and later was resident physician there from 1906 to 1908. In 1909 she went to Europe for post-graduate study in Vienna and Dresden, and in 1918 returned for a year's work with the Rockefeller Foundation on the problem of tuberculosis among the women and children in the villages of France. She was with the New York City Department of Health as Bacteriologist from 1905 to 1906 and as Medical Inspector of the Bureau of Child Hygiene from January 1913 to July 1920. From February 1920 until January 1929 she was Secretary of the Children's Committe of the New York Tuberculosis Association and from January 1929 until July 1935 she was Associate Executive Secretary of the Children's Welfare Federation. She was active in many medical organizations. Dr. Asserson was on the staff of Teachers College for 24 years prior to her retirement in 1937.

Community Resources Exhibit

Since the founding of Teachers College many aspects of its program have been concerned with the development of a close tie between community life and education. The varied enterprises housed in the Speyer School, the forward-looking program of New College, and the cooperation with the Manhattanville Day Nursery are but a few outstanding examples of this interest. Individual members of the faculty, too, have continuously associated themselves with significant rural and urban community-school projects.

The latest and perhaps most thoroughgoing effort to build better understanding

and cooperation between schools and other community agencies has been initiated at Teachers College this year under the direction of a Coordinating Council representing all the instructional divisions. In the Community Service Center which has been established on the first floor of Russell Hall a continuous series of exhibits, representing significant activities of various community agencies is being presented. Materials descriptive of outstanding school and community projects are being collected and will be available to students, members of the staff, and other interested persons.

The most significant functions of the Council, however, are to be found outside the "show window" activities housed in the Center headquarters. The responsibilities with which it has been entrusted by Dean William F. Russell, if adequately discharged, may well result in important changes in the educational program of the College.

The major objectives of the Council are twofold: first, to guide the development of a college program so that an offering adequate for the increasing numbers of non-school educational workers is provided; and second, to promote the community emphasis in offerings designed primarily for classroom teachers and school administrators.

A variety of plans is now under consideration. Changes have already been made in the program for the Summer Session. A new course on the use of community resources will be offered in the department of Curriculum and Teaching. The activities of the summer demonstration school will be reorganized to assure more extensive contacts with the local community. Certain modifications in the emphasis in the Foundations of Education courses are being considered.

Committees are being set up to review the field work and student-teaching program and to inaugurate field activities that will develop understanding of the interrelationships of the school and other educational agencies in the community. Meetings have already been held with representatives of such group work agencies as the Scouts, Young Men's and Young Women's Hebrew and Christian Associations, and settlement houses and with a group active in worker's education. Additional "get-acquainted" meetings between members of the College staff and the above and other groups are being planned.

Another major enterprise centers around the development of both rural and urban projects to explore the possibilities of home-school-community cooperation. Several proposals are being considered and it is expected that one or more experimental ventures will be developed for the coming year.

The present members of the Council are Professor Ernest Osborne, chairman, Professors Edmund deS. Brunner, Mary deGarmo Bryan, Harold F. Clark, Donald P. Cottrell, Frank W. Cyr, W. S. Elsbree, H. L. Forkner, Margaret Forsyth, W. C. Hallenbeck, Lillian A. Hudson, Ruth Strang, and Miss Alice Stewart. An associate membership with representatives from schools and religious, welfare, health, labor, agriculture, business, and consumer groups is being developed. It is planned that this group will work closely with representatives from the College on the development of policy and program.

Advanced School of Education

DOCTOR of Philosophy degrees have been conferred recently as follows:

Abraham Abbott Kaplan (October 8, 1942), director of adult education, Public Schools, Springfield, Mass. Dissertation: The Relation Between Socio-economic Factors and Participation in Adult Education. In press; Bureau of Publications, Teachers College.

Michael Joseph Lalor O'Connor (October 31, 1942), Washington, D. C. Disserta-

tion: Early American Political Economy Textbooks in Northeastern States, 1817-37, with Reference to the Interrelations of College and Secondary School Texts. In press.

John Ranton McIntosh (November 10, 1942), assistant professor of psychology, University of Saskatchewan, Saskatoon, Sask. Dissertation: Learning by Exposure to Wrong Forms. An Experimental Study of the Effect of Correcting Wrong Forms as a Practice Method in Grammar and Spelling. In press; Bureau of Publications, Teachers College.

Harold J. McNally, (November 12, 1942), director of special education, Allegany County, Cumberland, Md. Dissertation: The Readability of Certain Type Sizes and Forms in Sight Saving Classes. In press; Bureau of Publications, Teachers College.

John Replogle Beery (December 8, 1942), associate professor of education, University of Miami. Now with officer's training school at Miami Beach, Fla. Dissertation: Current Conceptions of Democracy. In press; Bureau of Publications, Teachers College.

Harold Elam Snyder (December 26, 1942), assistant to director, Commission on Teacher Education, American Council on Education, Washington, D. C. Dissertation: Educational Inbreeding: A Study of Local Residents as Teachers. In press; Bureau of Publications, Teachers College.

DOCTOR of Education degrees have been granted recently to the following students:

L. Tennant Lee (October 29, 1942), associate professor of education, Lehigh University, Bethlehem, Pa. Field of specialization: Administration of School Systems.

Helen Isabel Strickland (October 29, 1942), Director of Curriculum and Instruction, Public Schools, Wallingford, Conn. Field of specialization: Teacher Education.

Frank Laurance White (October 29, 1942), Casilla #77D, Santiago, Chile. Field of specialization: Religious Education.

Sih Kong Chen (December ?, 1942), associate professor, National College of Social Education, Chungking, China. Field of Specialization: Adult Education.

Marguerite Helene Malm (December 4, 1942), critic teacher in English, State Teachers College, Duluth, Minn. Field of specialization: Curriculum and Teaching.

Mrs. Ruth Caldwell Wright (December 4, 1942), dean of women, College of the City of New York. Field of specialization: Student Personnel Administration.

Frederick Crumb (December 22, 1942), Captain, School for Special Service, Washington and Lee University, Lexington, Va. Field of specialization: Administration of School Systems.

Lawrence W. Schwartz (December 22, 1942), Rabbi, Jewish Community Center, White Plains, N. Y. Field of specialization: Religious Education.

Arthur John Holden (January 22, 1943), Danville, Vt. Field of specialization: Rural Education.

Institute of Adult Education

PROFESSOR Morse A. Cartwright, Executive Officer of the Institute of Adult Education of Teachers College, has been appointed Consultant to the Bureau of Special Operations of the Office of War Information in Washington. He is serving on a half-time basis, without compensation.

Division I:

Foundations of Education

SOCIAL AND PHILOSOPHICAL FOUNDATIONS

PROFESSOR Edmund deS. Brunner discussed the educational training of volunteer leaders for war service in rural areas with the agriculture and home economics extension staffs of Pennsylvania and New Jersey on January 5 and 13 respectively.

PSYCHOLOGICAL FOUNDATIONS AND EDUCATIONAL RESEARCH

DR. Adella C. Youtz, associate in educational psychology, left for Texas in December to join her husband, Lieutenant Richard Youtz, who is engaged in experimental work in the Army Air Corps.

PROFESSOR Irving Lorge is acting as expert consultant to the Army Specialized Training Division organizing the Statistics and Reports branch of the Army College Program.

PROFESSOR Goodwin B. Watson, Chief Analyst, Foreign Broadcast Monitoring Service, returned by plane from England just before the Christmas holidays. At an informal luncheon he gave Teachers College staff members an interesting report on his impression of various aspects of the situation in England and on some of the features of his special mission. Professor Watson returned immediately to Washington to continue his work there.

THE Bureau of Publications of Teachers College has recently published *Teaching Reading to Slow-Learning Pupils* by Professor Arthur I. Gates and Dr. Miriam C. Pritchard. This report is based upon test results and experimental data obtained in Public School 500, Speyer School, during the five-year experiment with a special curriculum for low-normal pupils.

Division II: Organization and Administration of Education

THE following three courses are being offered in the Spring Session at Teachers College with the special problems of the war and post-war period in mind: Conference-Workshop on High School and Youth Education (Education 236CW). This course will involve the participation of Dr. William G. Carr, executive secretary, and Mr. G. L. Maxwell, assistant secretary, of the Educational Policies Commission. Conferences on Current Problems in Administration (Education 239CP). This course, which will meet alternate Friday evenings from six to nine, will be led by the staff of the administrative group and will include visiting specialists in connection with each problem under consideration. Problems of Secondary School Administration and Organization in a War Setting (Education 336MW). This course will be led by Dr. Galen Jones.

THE script of Professor John K. Norton's address, "Should Selected Senior High School Students Be Admitted to College?", heard on the Empire State Radio Forum of Union College at Schenectady, N. Y., appeared in the January 9, 1943 issue of *School and Society*.

PROFESSOR Paul Mort addressed the teachers of Montclair, N. J., January 14 at the invitation of Acting Superintendent Fred P. Reagle. On January 25 Professor Mort attended a meeting of the State Aid Committee of the Educational Conference Board at Albany, N. Y.

PROFESSOR Willard S. Elsbree is serving as Consultant to the Lyndhurst, N. J., Board of Education and Teachers Association in the revision of their salary policies.

PROFESSOR W. C. Hallenbeck has been asked to serve as a member of the committee under the Civilian Defense Volunteer Office which is planning the development of discussion groups on war problems and post-war planning in New York City. Professor Hallenbeck met with the personnel staff of established national group work agencies and emergency agencies dealing with group work and the representatives of the faculty of the New York School for Social Work in a series of conferences held early in De-

cember and in January for the purpose of finding a basic curriculum for the training of group work leaders in intensive short courses. It is proposed that such a course be given during the Spring Session at the New York School for Social Work. From December 14 through December 30 Professor Hallenbeck taught a class on the USO and community organization in the three weeks' orientation course for YMCA and USO workers held at Union Theological Seminary and Teachers College.

Division III: Guidance

PROFESSOR Ruth Strang spent two weeks in Washington last fall working with a committee appointed by Dr. John W. Studebaker to prepare a manual on Physical Fitness through Health Education. This manual is a part of the Victory Corps Program and will be sent to high schools throughout the country. Professor Strang attended the meeting of The National Committee on Cumulative Records which was held in New York recently. The work done thus far was reviewed and plans were made for completing the project.

As chairman of the Research Committee of the New York State Association of Deans and Other Guidance Personnel Professor Strang has initiated a study of the educational and vocational plans of gifted adolescents in wartime.

FOR some months there has been discussion concerning how Professor Sarah M. Sturtevant's former students and many friends might pay some concrete and lasting tribute to the wide and important influence she has exerted on American education. Out of this discussion came the proposal that a fellowship fund should be established in her name. Professor Sturtevant was aware that these plans were under way. On November 21 she wrote: "I am ever so happy to have the Sarah M. Sturtevant Fellowship issued in my name. I am so happy to have any memorial for me devoted to the values in which we all believe that I find it difficult to express my appreciation. I have always been more interested in the importance of our work than in any personal acclaim. The love and kindness of my friends have sustained me and given me courage during these months. Over and beyond even personal love is the work to which we all are giving our lives."

When a list was submitted to Professor Sturtevant as the group who might become a national sponsoring committee, she replied: "Thank you for letting me see the list of people you propose asking to serve on the committee. I can think of many others I would like to suggest your adding, others whom I equally admire, of whom I am equally fond, and who represent as truly the things in which we believe. I know the number cannot be increased much more, however, and the committee as it stands is a noble company. What a fine group they are!"

The committee that is organizing the work for this fellowship proposes to hold a luncheon meeting in March to which will be invited former students, professional associates, and friends of Professor Sturtevant. At this time the plans for the fellowship will be discussed and the cooperation of all invited. Further plans will be announced later.

Division IV: Instruction

ENGLISH AND FOREIGN LANGUAGES

ON December 29 Professor Frank Callcott attended an all-day meeting of the Executive Council of the American Association of Teachers of Spanish held at the Hotel Pennsylvania, New York City. Owing to the cancellation of the annual meeting of

the Association, the Executive Council was charged with determining the policy of the Association for the coming year. One of the most important topics considered was the place of the humanities in the schools during the war and during the period immediately following the war.

SPEECH

Professor Magdalene Kramer attended the annual meeting of the National Association of Teachers of Speech held in Chicago from December 27 to December 30. At the session on Speech in Teacher Education, she reported on a national survey which had been made of the place of Speech in the teachers colleges in the United States. She also sponsored a symposium on the problems involved in developing a Speech program from the first to the twelfth grade. Mrs. Jane Dorsey Zimmerman also attended the meeting of the Association and read a paper entitled "The Teaching of Prescriptive Phonetics in Voice and Diction Classes."

MUSIC

Professor Raymond Burrows and Mr. Anthony Loudis appeared in a two-piano recital at Mitchell Hall, Newark, Del., on January 15. On January 20 they gave a concert for the Columbia Dames in the Grace Dodge Room of Teachers College, and on January 31, over radio station WNYC, they played the Bach Concerto in C Minor for two pianos and string orchestra with the studio orchestra of that station.

HOME ECONOMICS

Professor B. R. Andrews has an article entitled "Your Money—and Your War" in the February issue of *Practical Home Economics*. It discusses war taxes and war savings in relation to the individual and the family budget.

Professor Dorothy Houghton has recently been appointed the American Home Economics Association representative to the Standards Council of the American Standards Association. For many years the American Home Economics Association has taken an active part in the technical committees working on standards for consumer goods, and as a member of the Standards Council it has had a voice in the American Standards Association decisions on approval of standards, initiating of projects, and membership of committees. As one of the lecturers in the Consumer Education series of the American Women's Volunteer Services, Professor Houghton spoke recently on "Informative Labeling" before a group of consumers at the Broadway Temple.

The Helen Kinne Home Economics Club has been organized for the year with the following officers: president, Mrs. Esther Call; vice-president, Lorraine Owens; secretary, Mary Kathryn Lynch; treasurer, Estelle Stack; Student Council representative, Elizabeth Stevenson. Professor E. C. McCracken is faculty adviser. The Club plans to sponsor a series of movies on different aspects of home economics, to participate in some of the Columbia University War Relief activities, and to carry out a program of social events and meetings.

Professor McCracken addressed the Women's Electrical Round Table at a meeting on January 12. Taking as his topic "Standards for Household Equipment," he discussed the work being carried on by the American Standards Association, and present and future possibilities of the Association. He also gave one of the lectures on the leadership level to the consumer education group of AWVS on January 13 on the subject, "Household Durable Goods."

BUSINESS EDUCATION

Professor H. L. Forkner and Miss Thelma Potter participated in panel discussions at the

meeting of the Commercial Education Association of New York City and Vicinity which was held on January 9. Professor Forkner dealt with the topic, "Extending the Business Curriculum in World War II," and Miss Potter discussed "Extending the Private Business School Curriculum in World War II."

HEALTH AND PHYSICAL EDUCATION

PROFESSOR W. L. Hughes will be toastmaster at a dinner meeting of the regional conference of the College Physical Education Association at the University of Pennsylvania February 20.

ON January 6 Professor Josephine Rathbone was guest speaker at the meeting of the American Association of University Women in Roselle, N. J. Her topic was "Relaxation in Our Times." On January 22 she spoke at the assembly of the Barringer High School in Newark, N. J., on the topic, "Physical Fitness."

Division V: Nursing Education

ON January 11 Mrs. R. Louise McManus addressed a meeting in Binghamton, N. Y., of the Association of Counselors of the High Schools. She discussed the guidance of high school students into nursing. She also spoke to members of the New York State League of Nursing Education on counseling students in the school of nursing.

MRS. McManus served as a member of a committee which prepared a new vocational pamphlet issued by the U.S. Office of Education as Vocational Division Leaflet No. 10. This should be of special interest to secondary school principals, teachers, and guidance specialists. It is entitled *A Plan for Secondary Schools and Schools of Nursing to Supply Professional Nurses Urgently Needed for War Time Service.*

Bureau of Publications

THE Bureau of Publications of Teachers College recently published *La Educación en los Países de América Latina*, a Spanish edition of the 1942 Educational Yearbook of the International Institute (Professor I. L. Kandel, editor). This volume was prepared in cooperation with the Office of the Coordinator of Inter-American Affairs. Practically the entire edition is being distributed in South America.

Office of Field Relations and Placement*

The following recent appointments of Teachers College Alumni are reported by the Office of Field Relations and Placement:

Allen, Gertrude H. (A.M. 1926), teacher of of mathematics and English, High School, Teaneck, N. J.

Allen, Lillian (A.M. 1926), teacher of English, High School, Masontown, W. Va..

Anquillare, Diane, assistant art supervisor, Public Schools, Bristol, Conn.

Arey, Charles K. (A.M. 1937), teacher of physics and chemistry, St. Paul's School, Garden City, N. Y.

Artale, Frances M., teacher of Spanish, Columbia High School, South Orange, N. J.

Bahnmuller, Marie, teacher of social studies, Central High School, New Paltz, N. Y.

Bakker, Jessie, public relations assistant, Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J.

Balgley, Reva, teacher of music, Public Schools, Fairview, N. J.

Ballarian, Anna N. (A.M. 1941), teacher of art, Central Park Junior High School, Schenectady, N. Y.

Barksdale, Susan E. (A.M. 1940), teacher of art, Averett College, Danville, Va.

Becker, Elna, consultant in home economics,

* Any student who is taking or has taken twelve points of work at Teachers College or any graduate of Teachers College may register with the Office of Field Relations and Placement. For initial registrations covering three years, no fee is charged. For information write to the Placement Office for its booklet, *Employment of Teachers and Administrators.*

State Department of Public Welfare, Richmond, Va.

Benson, Dorothy M. (B.S. 1939), teacher of music, Randolph Township School, Dover, N. J.

Blair, Hugh E., teacher of Spanish and Latin, High Schools, McCook, Neb.

Blum, Beatrice, assistant administrative dietitian, Beth Israel Hospital, Boston, Mass.

Boverini, Manlio (A.M. 1942), teacher of science, High School, Rockland, Mass.

Brazda, Alice (A.M. 1941), teacher of English and commerce, Central School, Deposit, N. Y.

Brown, Elinor W. (A.M. 1942), research associate, S. Eels Research Institute, Antioch College, Yellow Springs, Ohio.

Browning, Marjorie (A.M. 1937), instructor in physical education, Winthrop College, Rock Hill, S. C.

Burch, Rosabel (A.M. 1931), regional nutrition representative, Federal Security Agency, Boston, Mass.

Cabrera, Louis J., teacher of Spanish and French, High School, Park Ridge, N. J.

Carey, J. Sheldon (A.M. 1942), instructor in ceramics, Rhode Island School of Design, Providence, R. I.

Carter, Dorothy M. (B.S. 1942), teacher of home economics, Avenue School, Ardmore, Pa.

Cauthers, Marion (A.M. 1939), head of art department, College of Puget Sound, Tacoma, Wash.

Clark, Sarah, teacher of science, High School, Mulberry, Fla.

Clarke, Helen (Ph.D. 1934), dietitian, Amsterdam City Hospital, Amsterdam, N. Y.

Cochran, Warren B. (A.M. 1925), acting principal, Friends School, Brooklyn, N. Y.

Cocking, Walter D. (Ph.D. 1929), chief of educational services, OPA, Washington, D. C.

Cole, Austin A. (Ed.D. 1942), principal, Robert K. Toaz Junior High School, Huntington, N. Y.

Conklin, Ruth Miriam (A.M. 1939), personnel investigator, Western Electric Company, Kearny, N. J.

Cox, Robert C., instructor in physical education, Duke University, Durham, N. C.

Davis, Georgia, professor of education, Whittier College, Whittier, Calif.

Dear, I. Adelaide (A.M. 1936), kindergarten teacher, Silver Cross Day Nursery, New York, N. Y.

Delevin, Elizabeth Lee, teacher of English, Public School, Highland Falls, N. Y.

Donovan, Elizabeth (B.S. 1932), instructional consultant, State Department of Education, Atlanta, Ga.

Downey, Agnes (A.M. 1939), teacher of English, High School, Canton, Mass.

Ellis, Mary (A.M. 1939), therapeutic dietitian, Hospital of the Woman's Medical College, Philadelphia, Pa.

England, Kathryn McA. (A.M. 1937), instructor in English, Woman's College of the University of North Carolina, Greensboro, N. C.

Evans, Shirley Richardson (A.M. 1940), instructor in physical education, Tennessee Agricultural & Industrial State College, Nashville.

Field, George A., Jr., teacher of social studies, High School, Bayport, N. Y.

Frey, Ann J. (B.S. 1939), teacher of art, Greeley School, Chappaqua, N. Y.

Gale, George E. (A.M. 1941), teacher of music, Public Schools, Mullan, Idaho.

Gelinas, Paul J., supervising principal, Setauket High School, East Setauket, N. Y.

Gerichs, Louise (B.S. 1939), teacher of special classes, Edison School, Hammond, Ind.

Gilbert, Gladys G. (A.M. 1939), teacher of science, Junior High School, Nutley, N. J.

Gordon, Mordecai H. (A.M. 1937), personnel consultant, Headquarters Fourth Service Command, Atlanta, Ga.

Graham, Dorothy E. (A.M. 1942), teacher of home economics, Public Schools, Hasbrouck Heights, N. J.

Greenawalt, G. L. (A.M. 1929), acting superintendent of schools, Jackson, Mich.

Gregory, Sadie May, secretary, YWCA, Boston, Mass.

Halliburton, J. K. (B.S. 1942), teacher of art, State Department of Correction, Woodbourne, N. Y.

Harvill, Eleanor (A.M. 1942), teacher of Spanish, Riverdale Country School, Riverdale, N. Y.

Hawkins, Anne (A.M. 1939), dietitian, Bronx Hospital, Bronx, N. Y.

Hayford, Ruth Drake (A.M. 1939), instructor in English, Texas Technological College, Lubbock, Tex.

Hill, Frederick William (Ed.D. 1942), secretary of Board of Education, Abington Township Public Schools, Abington, Pa.

Hill, William Wilson (Ed.D. 1942), assistant superintendent, Jefferson County Board of Education, Birmingham, Ala.

Hilton, Esther A. (A.M. 1940), instructor in science, Blackstone College for Girls, Blackstone, Va.

Honan, Dorothy E. (A.M. 1940), teacher of English, High School, Dannemora, N. Y.

Howard, Mary Elizabeth, teacher of English, Franklin County High School, Decherd, Tenn.

Hughes, Muriel Joy, instructor in English, University of Vermont, Burlington, Vt.

Israel, Phylis, kindergarten teacher, Sky-Top School, New York, N. Y.

James, Carolyn, teacher of science, Radford School for Girls, El Paso, Tex.

Kane, Mary Isabel, cafeteria assistant, Teachers College, Columbia University, New York, N. Y.

Keesey, Ruth M., teacher of social studies, High School, Mineola, N. Y.

Kilmer, Elmer Kinsey (A.M. 1926), professor of psychology, Muhlenberg College, Allentown, Pa.

Kliemand, Alice Virginia (A.M. 1942), Belmont Boulevard School, Elmont, N. Y.

Knowles, Helen V. (A.M. 1942), teacher of Latin and French, Wellesley Junior High School, Wellesley Hills, Mass.

Knowlton, Wallace H., Jr. (A.M. 1941), teacher of social studies, Junior High School, Reading, Mass.

Kurilecz, Margaret, teacher of English, High School, Dobbs Ferry, N. Y.

Lacey, Edith M. (A.M. 1942), director of nursing, YWCA, Brooklyn, N. Y.

Langen, Henry C., Jr., teacher of business administration, City College of New York, New York, N. Y.

Lawton, Louisa H. (A. M. 1929), head of art department, Colorado River War Relocation Project, Poston, Ariz.

Leeder, Janet S. (A.M. 1939), assistant professor of music, Pennsylvania State College, State College, Pa.

Lingle, Nan R. (A.M. 1933), technical correspondent, Carbide & Carbon Chemical Corp., New York, N. Y.

Lloyd, Raymond Grann (A.M. 1942), instructor in social studies, Prairie View State College, Prairie View, Tex.

Lockwood, Margaret, teacher of fifth and seventh grades, St. Marguerite's Home School, Ralston, N. J.

Lohrmann, Theodora, librarian, American Management Association, New York, N. Y.

Lowe, Ethel Black, teacher of first grade, Lakeville School, Great Neck, N. Y.

Lowe, Laura Elizabeth (A.M. 1937), assistant director, USO program work, YWCA, New York, N. Y.

Lyman, Alice Willard (A.M. 1942), director of music, John Lewis Childs Public School, Floral Park, N. Y.

MacLean, Dorothy, teacher of social studies, Junior-Senior High School, Freeport, N. Y.

Madden, Luella (A.M. 1938), instructor in business administration, Eastern New Mexico College, Portales, N. M.

Mann, Gertrude Alpert (A.M. 1942), instructor in home economics, Horace Mann-Lincoln Schools, New York, N. Y.

Martin, Dorothe L., teacher of English, Eastchester High School, Tuckahoe, N. Y.

McGilvrey, Louise (Ed.D. 1942), instructor in physical education, State Teachers College, Danbury, Conn.

McIlrath, Helen (A.M. 1930), librarian, Senior High School, Kingman, Kan.

McIlvain, Dorothy S. (A.M. 1931), director of art, Public Schools, Spokane, Wash.

Moore, Mary Elizabeth (A.M. 1938), associate professor of physical education, Louisiana State, University, Baton Rouge, La.

Mosher, Willena (A.M. 1928), teacher of Spanish and English, High School, Aruba, D. W. I.

Mulcaster, Anne M., dietitian, Muhlenberg College, Allentown, Pa.

Myers, C. Virginia, head of English department, Mission House College, Plymouth, Wis.

Neylan, Agnes R. (B.S. 1937), instructor in home economics, College of Home Economics, University of Maryland, College Park, Md.

Onesti, Sylvia (A.M. 1942), teacher of special classes, Public Schools, New Rochelle, N. Y.

Parks, Arthur Lincoln, teacher of social studies, The Slade School, Olney, Md.

Patty, William L. (Ph.D. 1938), industrial personnel administration, Eastern Aircraft, General Motors Corp., Trenton, N. J.

Pitt, Anna B. (A.M. 1940), teacher of science, The Calhoun School, New York, N. Y.

Porter, Marion E. (A.M. 1941), teacher of commerce, High School, Stratford, Conn.

Powers, J. Eileen, teacher of English, High School, Clayton, Mo.

Primes, Agnes Alma, engineering assistant, Western Electric Co., Kearny, N. J.

Pugh, Wilma J., instructor in social studies, Bates College, Lewiston, Me.

Raeppel, Josephine E., librarian, YMCA, New York, N. Y.

Raymond, Elizabeth Jean (B.S. 1942), teacher of first and second grades, Center School, Norton, Mass.

Reade, Evelyn M. (A.M. 1942), instructor in in physical education, High School, Cranford, N. J.

Reed, Mary E. (A.M. 1937), assistant manager of cafeteria, Bendix Aviation Corp., Philadelphia, Pa.

Reid, Alice Ruth (A.M. 1942), instructor in physical education, Georgia State Woman's College, Valdosta, Ga.

Rhodes, Katherine L. (B.S. 1942), teacher of first grade, Chestnut Street School, West Hempstead, N. Y.

Rogers, Kathleen V. (A.M. 1941), teacher of English and home economics, Senior High School, Hackensack, N. J.

Saerchinger, Mildred, nursery school teacher, Brightside Day Nursery, New York, N. Y.

Sagul, Edith (B.S. 1942), teacher of art, Allen-Stevenson School for Boys, New York, N. Y.

Saunders, Carleton M. (Ed.D. 1940), supervising principal, Bridgewater Township Schools, Raritan, N. J.

Schneider, Sophia A. (A.M. 1939), teacher of English, South Side High School, Rockville Center, N. Y.

Shapiro, Seymour, instructor in aircraft instruments, Army Air Forces Technical School, Chanute Field, Ill.

Shefrin, Rosalyn (A.M. 1940), nursery school teacher, Helen Leah Nursery School, New York, N. Y.

Sober, Margaret E. (A.M. 1930), student affairs adviser, Brooklyn College, Brooklyn.

Swatling, Helen D. (B.S. 1942), Public School, Bronxville, N. Y.

Thames, Sarah, assistant professor of home economics, University of Connecticut, Storrs, Conn.

Thompson, Florence B. (A.M. 1937), regional supervisor of homemaking education, State Department of Education, Sacramento, Calif.

Thompson, Will S., industrial analyst, WPB, Washington, D. C.

Titcomb, Beatrice E. (A.M. 1940), instructor in social studies, Morse High School, Bath, Me.

Van Duzer, Roberta A., school nurse, Central School, Schoharie, N. Y.

Waller, Margaret A., teacher of English, Central High School, Deposit, N. Y.

Walters, Ruth (B.S. 1942), teacher of physical education, Berkeley Institute, Brooklyn.

Weil, Le Roy W. (B.S. 1942), psychological tester, Chrysler Apprentice Training School, Detroit, Mich.

Wood, Mary Ethel (A.M. 1928), teacher of science, Westbrook Junior College, Portland, Me.

Wright, Charlotte A. (A.M. 1934), assistant dean, Ward-Belmont School, Nashville, Tenn.

Zabriskie, Mary E., librarian, Public Library, Rochester, N. Y.

Alumni Activities

JUNIUS L. MERIAM (Ph.D. 1905), professor of education at the University of California, Los Angeles, has completed a research study of public school curriculum during the period from January 1, 1932 to December 31, 1939. The manuscript of this study has been accepted by the University of California Press for publication in the near future.

W. B. TOWNSEND, post-doctoral student and interne in the Guidance Laboratory at Teachers College, Columbia University, Winter Session, 1938-39, is classification officer at Camp Haan, Riverside County, Calif., with the rank of first lieutenant.

IONA R. LOGIE (Ph.D. 1938), teacher and counselor at Hunter College High School, New York City, is treasurer of "Books Across the Sea," a new circle at the English-Speaking Union which promotes the exchange of recent books between Britain and America. Dr. Logie has had published by Harper & Brothers a new series of *Careers in the Making*, biographical excerpts edited for vocational guidance values.

HOWARD A. PRENTICE (Ed.D. 1940) entered the United States Coast Guard in May, 1942 with the rank of lieutenant. He was on duty in Boston, Mass., as District Training Officer. In December he was promoted to lieutenant commander.

CHARLES F. REID (Ph.D. 1941), on leave of absence as instructor in education, College of the City of New York, is secretary of the Air Support School, Orlando, Fla., and a captain in the Air Corps.

JESSE D. BURKS (Ph.D. 1905), well-known educator, psychologist, and expert in governmental efficiency, died at his home in Palo Alto, Calif., November 16, 1942. Dr. Burks was one of the first to call attention to the responsibility of the school for the health of children and to suggest programs for carrying out this duty. During the first World War he served as a captain and later as a major on the general staff in Washington, where he conducted research in the Ordnance Department.

DONALD E. SUPER (Ph.D. 1940) has been serving since March, 1942 as a first lieutenant in the Army Air Forces, in charge of developing group tests of personality and temperament for the classification of air crew personnel at Psychological Research Unit No. 1, Army Air Center, Nashville, Tenn. In September, 1942 a new book by Dr. Super, *The Dynamics of Vocational Adjustment*, was published by Harper & Brothers.

LAURANCE F. SHAFFER (Ph.D. 1930) is a major in the Air Corps and director of Psychological Research Unit No. 1, Army Air Center, Nashville, Tenn.

ANTHONY C. TUCKER (Ph.D. 1940) is a captain in the Air Corps and assistant director of Psychological Research Unit No. 3, Kelly Field, Tex.

CARL D. VOLTMER (Ph.D. 1935), director of health and physical education, State College, Warrensburg, Mo., is at work on the manuscript of "You Can Be an Athlete," a book for high school age boys and their coaches.

J. W. Baldwin (Ph.D. 1929), associate professor of education at the University of Texas, had four research projects published between April, 1941 and January, 1942, one of them as a University of Texas Bulletin. "Study of Trends in Academic Major and Minor Prescriptions for Student Teaching in Teacher Education Institutions," appeared in the December, 1941 issue of *Educational Administration and Supervision*, and "A Study of Specialized Professional Preparation of Social Studies Teachers in Teacher Education Institutions," in the January, 1942 issue of *School and Society*. Dr. Baldwin is now at work on the manuscript of a book on the teaching of social studies.

Willis H. Reals (Ph.D. 1928) is acting dean of University College, Washington University, St. Louis, Mo.

J. L. Hypes (Ph.D. 1927) is continuing as head of the department of sociology, University of Connecticut, and as a member of the Council on Human Relations of the American Association for the Advancement of Science. Recently he completed a research project entitled "Social Factors Related to Erosion in the Scantic River Valley, Connecticut."

Louis T. Benezet (Ph.D. 1942) is associate professor of psychology and assistant director of admissions, Knox College, Galesburg, Ill. He will spend the next half year in Chicago as field representative for the college, carrying on contact work with alumni, parents, and other groups in the Chicago area.

Alfred Stafford Clayton (Ph.D. 1941) is teaching philosophy and psychology under Dr. Buell Gallagher (Ph.D. 1938) at Talladega College, Talladega, Ala.

Raymond A. Kent (Ph.D. 1918) is a member of the Navy Advisory Council on Education, and chairman of the American Council on Education Commission to Survey the University of Illinois.

George Forlano (Ph.D. 1936) has been a captain in the Army Air Forces, Base Surgeon's Office, Drew Field, Tampa, Fla., since September, 1942.

Raymond M. Mosher (Ph.D. 1925) has been professor of psychology at San Jose State College, San Jose, Calif., for the past twelve years. In August, 1942 he concluded his eighth summer session at the University of Missouri, where he has taught courses in intelligence testing, mental hygiene, and guidance and personnel.

Edwin W. Davis (Ph.D. 1942), director of educational research and guidance, State Department of Education, Montpelier, Vt., has recently been made a member of the Board of Directors for the Alliance for Guidance of Rural Youth, in addition to serving on the board or as an officer in various state and local groups, among them the Vermont Association for the Crippled, Vermont Mental Hygiene Association, Montpelier Rotary Club, and Vermont Guidance and Personnel Association. Dr. Davis has been asked to take charge of the State Program of radio education, which consists of one broadcast a month on the Governor's Radio Hour and one a month entitled "Vermont Teachers Meeting of the Air." A daughter was born to Dr. Davis and his wife, Marilyn Parks Davis (A.M. 1938), last August.

Frances S. Sobel (Ph.D. 1936) has been appointed psychologist in the public school systems of Bedford Hills, Ossining, and Tarrytown, N. Y. Her responsibilities will include supervision in remedial reading, group and individual guidance, and psychological counseling. Dr. Sobel will continue her work as instructor, School of Education, the College of the City of New York.

ELOISE CASON (Ph.D. 1942) is school psychologist and primary-elementary supervisor in Montgomery County, Md. She reports that work is being begun on a project which will give extra opportunities to gifted children within the framework of each school.

WILLIAM S. TAYLOR (Ph.D. 1924), dean of the School of Education, University of Kentucky, Lexington, Ky., is at work on an experiment in applied economics. Dr. Harold F. Clark of Teachers College, Columbia University, is consultant for this experiment in cooperation with the Alfred P. Sloan Foundation.

J. D. WILLIAMS (Ph.D. 1924), formerly director of the University Schools of the University of Kentucky, began his work as president of Marshall College, Huntington, W. Va., in September, 1942.

DOROTHY VAN ALSTYNE (Ph.D. 1929) is assistant professor of educational psychology, Duke University, Durham, N. C. Within the past year she has completed a remedial reading research program financed by funds secured through the WPA in Boulder, Colo.

PAUL E. BAKER (Ph.D. 1934) is assistant professor in the Human Relations Center, Hampton Institute, Hampton, Va. He is beginning work on a research project entitled "Education for Life and for Making a Living in Negro Colleges."

I. B. BERKSON (Ph.D. 1920) has completed a manuscript on contemporary movements in education which will be published in the spring by Harper & Brothers under the title, *Education Faces the Future: An Appraisal of Contemporary Movements in Education.*

EARL K. PECKHAM (Ed.D. 1940) has been appointed Instructional Administrator in Kern County, Calif. The staff consists of four general supervisors, four special supervisors, a research department, and a curriculum department.

HOWARD T. HERBER (Ph.D. 1928), superintendent of schools, Malverne, N. Y., has recently been appointed a member of the Research Committee of the New York State Council of City and Village School Superintendents.

JOHN C. LINDSAY (A.M. 1923) was voted to an honorary life membership in the South Dakota Education Association at its October meeting. He is serving as a member of the steering committee for the state elementary course of study.

R. D. CHADWICK (A.M. 1924), dean of Duluth Junior College, is a member of the Board of Review, Commission on Colleges and Universities, North Central Association.

GERTRUDE LAWS (Ph.D. 1927), director of education for women, Pasadena, Calif., City Schools, left the State Department of Education in July, 1940, after thirteen years of service as Chief of the Bureau of Parent Education, to go to her present position. She writes that it seemed desirable to test out some of the theories by working in a specific community. Dr. Laws is at work on a program of Child Care for Working Mothers, and is assisting in the development of a community program of food production, both new projects.

CASKEY SETTLE, head of the department of health and physical education, State Teachers College, Oneonta, N. Y., has been appointed Assistant Field Director in Recreation with the American Red Cross for duty with the Armed Forces in foreign service. He reported in Washington, D. C., on January 25.